Artificial Intelligence in the workplace in Cyprus:

An employee perspective

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Abstract

The present study aimed on placing Cyprus into the research map of AI in the workplace. It focused on investigating main variables job replacement anxiety experienced by employees, acceptance and trust of AI in the workplace, from the employee perspective. AI can be considered the most advanced form of technology development to date and its use is advancing rapidly within the companies, therefore is a business area that needed further research through the last years and for the days to come. The selection criteria were employees that work in Cyprus, random sampling of participants was performed using probability sampling. A total of 264 answers were collected, via a self-completion questionnaire shared with the help of Google forms, and R statistical software was used to analyse the data. The results have successfully provided an initial overall understanding of the employee perspective about AI in the workplace in Cyprus. The attention was brought mainly to low skilled and low-level employees, who experience higher level of job replacement anxiety and therefore less readiness to embrace and accept AI technology and finally trust AI. Moreover, significant association was revealed between the main variables with job satisfaction and trust in the organisation. Lastly, study results revealed vital to ensure less job replacement anxiety and higher acceptance and trust of AI technology in the workplace, AI and general technology knowledge, awareness, and familiarity.

Keywords: Artificial Intelligence, anxiety, job replacement, acceptance, trust.

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Introduction

Artificial intelligence (AI) is described by Nilsson (1984, p.5) as a ‘‘different class of machines”, machines that can perform a simulation of human intelligence processes, tasks requiring human reasoning, judgement, and perception (Nilsson, 1984). More recent papers define AI as computing technologies that simulate or imitate intelligent behaviors relevant to the ones of humanistic ones, regardless the fact that until now is known that computers behave different than humans (Bhave, Teo, & Dalal, 2020). In this context, AI can be considered the most advanced form of technology development to date. In addition, it can be linked with computers, robotics, automation, and all the associated definitions, the list go on. Nevertheless, the introduction of AI in the business world equation is part of the fourth industrial revolution that is just around the corner and is what separates the fourth from the third industrial revolution.

The use of AI is advancing rapidly, it is expected that within the next years over fifty billion connected machines will exist all over the world (Wisskirchen, et al., 2017). Since the use of technology, robotics, automation, and AI within the companies is increasing too, this is a business area that needed further research through the last years and for the days to come. Research on AI in business lately has developed dramatically during the last decade, in the direction of the interest in human users’ perspective moving away from the focus on technological objectives only (Łapinska, Escher, Górka, Sudolska, & Brzustewicz, 2021). As it concerns Human Resources in a business, AI may affect the HR both as the use of AI in HR and as the impact to employees of the general use of AI in the business.

There is much literature that addresses the ways that information technology and technological innovations have begun to change Human Resource Management (HRM) in a broader sense and how human and robots collaboration can support HRM. In addition, there is plenty literature on the role of AI in learning and training, e-recruitment, employee self-service interface, electronic performance monitoring systems, AI algorithmic technologies, digital assistance,

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simulations, and surprisingly AI increasingly offer alternatives to the actual decision making (Vrontis, et al., 2021). The above HR information systems and technologies provide numerous options for improving and lowering the cost of HRM functions, such as, the evaluation of job applicants (Bondarouk, Parry, & Furtmueller, 2017; Cooke, Liu, Liu, & Chen, 2019) and employee performance appraisals (Abraham, et al., 2019; Parry & Tyson, 2008). Vrontis, et al. (2021) results showed that these technologies may offer several new opportunities and alternatives in functions traditionally requiring human interaction and communication (Malik et al., 2019 as cited in Vrontis, et al., 2021; Luo, Tong, Fang, & Qu, 2019), but also add to the business considerable challenges at a technological and ethical level. As a result, both organizational structures and the nature of work are changing (Colbert, Yee, & George, 2016).

There are papers also that examine AI from the human – employee perspective. HR literature focuses mainly on the employee well-being and anxiety caused by fear job replacement by AI, acceptance and trust of AI in the business (Vrontis, et al., 2021). Despite the tremendous growth of academic research in intelligent automation, we still lack a complete knowledge of the consequences of these new technologies on HRM at both the organizational (firms) and individual (employee) levels (Vrontis, et al., 2021).

AI has enabled significant renovations in the way people work and consequently in organizational structures, forms, routines, tasks, and functions (Bondarouk, Parry, & Furtmueller, 2017). The rapid development of AI may alter the nature of work fundamentally but also it poses a serious threat to human employment (Vrontis, et al., 2021). Some researchers estimate that one third of the jobs that exist today, could be taken by AI (Brougham & Haar, 2018) and not only referring to just low paid, low skilled positions, sophisticated algorithms are coming to replace decision making as well. Other researchers though claim that the the number of jobs will increase, but the nature of these jobs will change (Levy & Murnane, 2013). Important results by Mutascu (2021) show that no linear function relates a country's level of AI and its unemployment rate. In

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addition, AI in low inflation rate countries seems to improve employment, while its impact seems to be invalid in any case (Mutascu, 2021).

Organizations have acquired numerous new capabilities into their operations since AI in many cases can perform tasks better than humans (TechTarget, 2021). AI tools have enabled operations across borders effortlessly (Cooke, Liu, Liu, & Chen, 2019; Vrontis, et al., 2021) and have provided with quicker and with relatively fewer errors completed tasks, especially when it comes to repetitive and detail oriented tasks. A robot is consequently cheaper than a worker, cannot become ill, have children, or go on strike and is not entitled to annual leave; it works reliably and constantly and in danger zones without depending on external factors. AI or robotics accuracy is greater than that of a human, and it cannot be distracted either by fatigue or by other external circumstances. The interplay between firms, workers and clients is essentially changing and the introduction of AI into the administrative activities and tasks is escalating (Larivière, et al., 2017; Marler & Parry, 2016; Vrontis, et al., 2021). These intelligent "beings" are nowadays used by the most successful organizations to gain a competitive advantage towards their opponents (TechTarget, 2021).

As previously cited, one of the main advantages of the use of AI in an organization level are cost savings. Adding to that, expanding the viability of business processes or eliminating the so-called human error in the process of performing specific tasks are other business advantages with the use of AI (Davenport, 2018). The advantages of the use of AI can be seen also from the perspective of the employees. Employees notice that gratitude to AI, can perform tasks that were previously too complicated or hazardous, and this allows individuals easier access to data and huge time investment funds (Davenport, 2018).

Oppositely, the wide use of AI may also lead to negative effects both at organization and individual level. Business is always in the concern of the lack of technological readiness of the company to implement such solutions and therefore loss of the competitive advantage as a result of faster implementation of AI by competitors in the market (Ryczkowski & Zinecker, 2020; Cheatham, Javanmardian, & Samandari, 2019). On the individual level, as previously mentioned, literature

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suggests that most employees are dominated by the of losing their current jobs. Employees' reluctance to change and even resistance to the implementation of AI adds on the barriers opposed to organizations.

This thesis focuses on the employee perspective of AI in the workplace and aims on providing data on their side of the business equation. How employees in Cyprus perceive the use of AI in their workplace? Pont by point, do employees experience anxiety towards the introduction of AI in their workplace, do they accept the use of it, and do they trust it? Since literature lack a complete knowledge of the consequences of AI on individual level this thesis could provide literature with some very significant findings. In addition, putting Cyprus into the research map of AI in organisations might be challenging considering the Cypriot culture, there is little literature anyway for European countries or countries with similar culture. This study could be a starting point to provide a rather general idea, on employees' mental health, acceptance and trust, which will need to be explored further in the future.

Cyprus among with Greece hold the top of the rankings for the uncertainty avoidance according to Hofstede's cultural dimensions. The score of the country on uncertainty avoidance represents the extent to which individuals of a culture "feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these" (Hofstede, 2021, Country Comparison). Cypriots are not at all comfortable in ambiguous situations, "the unforeseen is always there ready to lay an ambush" and this ambiguity inevitably brings with it anxiety (Hofstede, 2021).

Employees' experience of AI in the workplace is very important to business literature. Lower motivation and efforts, higher turnover rates, reduced commitment are only some of the consequences of unhappy and dissatisfied workers. On the off chance that an enormous number of workers experience fear to be replaced by the introduction of AI, do not accept and trust AI, this will accordingly hinder productivity and innovation in the economy (Schwabe & Castellacci, 2020).

To add on the above, Microsoft CEO observed that we have nowadays seen two years' worth of digital transformation in two months (Estlund, 2021). The bizarre COVID-19 pandemic

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brought the biggest jump in unemployment and at the same time in AI growth, acceleration of automation and immediate move to digital. Therefore, it is a critical time to evaluate the impact of the use of AI in the workplace if it is not too late.

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Literature Review

With the accelerating development and wide application of AI and other breakthrough technologies lots of advantages are brought to business, enabling organizations to replace humans with intelligent machines and algorithms (National Academies of Sciences, 2017). According to estimates, these new technologies will influence millions of people in a wide range of occupations in the future years, replacing human workers in a variety of tasks (Brynjolfsson, Mitchell, & Rock, 2018), but potentially also in whole occupations (National Academies of Sciences, 2017). Acemoglu and Restrepo (2017), Graetz and Michaels (2018) and Dauth, Findeisen, Südekum, and Wößner (2017), among others, have revealed preliminary indications that industrial robots are having an impact on the workforce in the United States, European countries and in Germany, respectively. Many researchers have taken the next step to calculate the replaceability of either tasks or whole occupations (Frey & Osborne, 2017; Arntz, Gregory, & Zierahn, 2017). It is predicted that a third of jobs that exist today, by 2025 could be taken by Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA). In addition, the McKinsey Global Institute estimates that 400 to 800 million workers will be replaced by AI by 2030 (Manyika, et al., 2017).

When it comes to employees benefits by the predicted replacement, it is possible that employees will have to do less manual or hard work; repetitive, monotonous tasks that can be performed by autonomous systems; collect and process data that algorithms can perform. This will free time for employees for creative and more enjoyable activities. Already today, the number of factory workers is steadily reducing, and humans are increasingly becoming the control mechanism of the machines.

All the above alert the need to shift to new job structures that will demand more highly qualified and educated employees. Skills such as communication, critical thinking, and problem solving, which are particularly computers find it hard to match (Levy & Murnane, 2013). Cooperation with the machines, creativity, and flexibility are becoming increasingly important and an expected requirement for employees. The expectations with respect to availability will be higher for future

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employees. Despite the obvious fear of losing, one's job the above may add on employees anxiety regarding using AI technologies in the workplace. Recent studies revealed that employees expressed their worry about the "future where robots and computers can do the jobs of many humans", while only a minority were enthusiastic about it (PEW Research Center, 2017).

The use of AI in the workplace can standardize and synchronize work to a greater extent, resulting in an improvement in efficiency and a better control of performance and additionally more transparency in the company (Wisskirchen, et al., 2017). As listed on the previous pages many are the advantages of using AI in the workplace, and as it comes at this point there is no way back. It logically revives, as also mentioned before, that the use of AI in the workplace brings to employees reasonable fear of job replacement and experience anxiety or similar harms on their well-being.

AI Anxiety

In general, employee anxiety or as called job stress is "a particular individual's awareness or feeling of personal dysfunction as a result of perceived conditions or happenings in the work setting (Parker & DeCotiis, 1983, p. 161) (Law, Martinez, Ruggs, Hebl, & Akers, 2011). In addition, job anxiety refers to employees' propensity to emotional tension caused by anxiety related to fear or anxiety caused by several factors in their work life (Verma, 2015; Rhee & Jin, 2021). Individuals have gradually begun expressing anxiety concerning AI (Johnson & Verdicchio, 2017; Waltz, 2006), researchers refer to this kind of anxiety as AI anxiety. AI anxiety has evolved as a result of AI's rapid development and is winning extensive attention, yet though study on the topic is limited (Li & Huang, 2020). What is experienced by employees towards AI in the workplace is probably a combination of AI anxiety and job stress. Literature on both must be examined and should reveal the attitude of employees towards AI in the workplace and most essentially their mental health. The mental health of workers depends on a plethora of factors, which are not at all times observable (Abeliansk & Beulmann, 2019).

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As third industrial revolution may have generated computer anxiety, AI may cause a broader range of anxieties. The most common are job replacement anxiety (Manyika, et al., 2017), privacy violation anxiety (Chopra & White, 2007), safety and regulation anxiety (Scherer, 2016), and as with other new technologies, learning anxiety (Li & Huang, 2020). Zhou, Moayedi, Bahiraei, and Lyu (2020) and Bahiraei, Heshmatian, and Moayedi (2019) showed that diverse sorts of anxiety will emerge naturally when AI is used in various fields. Furthermore, AI anxiety may also generate a series of other social issues (Amodei, et al., 2016). As AI technology advance, for example adding to the equation face recognition and autonomous driving, new anxieties about privacy and safety concerns will emerge (Lu, Li, Chen, Kim, & Serikawa, 2018; Nyholm & Smids, 2016) as well as new kinds of anxieties may be developed deppending on the advances.

Therefore, it is inevitable, as the technology advances, AI anxiety will become more widespread among the public. It is established that AI anxiety has a multi-dimensional composition that has not been determined yet. However, the concept of AI anxiety has received little attention from researchers, and it needs further and detailed examination to cover the subject.

AI anxiety in the workplace – Job replacement anxiety

The most common AI anxiety that literature suggests is that of job replacement anxiety. Data from a very extensive study by Granulo, Fuchs, and Puntoni (2019) revealed that individuals are more likely to agree than disagree that “robots” are stealing their jobs. The data also revealed that the pattern was robust across different occupational groups, including workers and managers at the same pattern, as well as across different countries. It seems that people generally favor the belief that robots are a threat to human jobs.

Do employees fear that their occupation might be replaced by a smart machine in the future, is there a pattern for employees that experience this AI anxiety or is it common to all employees?

At this point is important to add from Granulo, Fuchs, and Puntoni (2019) study, the argues that this fear of job replacement by robots or AI makes employees more concerned than when the

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fear of loosing one's job is caused by human replacement. The results are controversial towards technological job replacement. Whereas participants seem to prefer human workers to be replaced by other human workers than by robots, this preference should reverse when people consider the prospect of losing their own job (Granulo, Fuchs, & Puntoni, 2019). The explanation to the above is probably because being replaced by robots versus by other humans poses a less direct threat to people's self-worth (Granulo, Fuchs, & Puntoni, 2019).

Data from Abeliansk's and Beulmann's (2019) paper confirm that robots do really influence the mental wellbeing of employees, but they influence individuals totally different ways. To begin with, data revealed that men are more likely than women to see their mental wellbeing breaking down (Abeliansk & Beulmann, 2019). The case is explained by the higher possibility for automation or AI to be used for tasks mainly performed by males (Abeliansk & Beulmann, 2019).

Furthermore, Abeliansk and Beulmann (2019) in their paper revealed that the perceived threat of AI or technological replacement is highest within the youngest group of participants. Other studies come to agree with that finding. Younger individuals look upon to their own job replacement as an upcoming possible threat to their job opportunities in the future, while older ones look at it as a positive technological development that is not likely to affect them directly (Schwabe, 2019 as cited in Schwabe & Castellacci, 2020). Older employees tend to believe that AI and technological development will improve wellbeing and prosperity in the society, whereas younger employees life satisfaction is affected by the fear of job replacement (Schwabe, 2019 as cited in Schwabe & Castellacci, 2020).

Brougham and Haar (2018) explain the dependance on age on awareness of AI, robotics or any smart technological development and AI (known and referred in the paper as STARA). Their results showed that older employees do not perceive STARA as a threat to their current job or any of their career expectations. Whereas this might reflect being happily unconscious of these potential changes, and that this might be explained by awareness about these technological advances, it is more likely to speak to the conclusion of the career cycle for the older employees. Therefore, older

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employees have less stress and strain from their STARA awareness (Brougham & Haar, 2018) and from the fact that they are closer to their career end point and do not perceive any threats.

All those studies showed additionally evidence that basically routine tasks could be shockingly more exposed to the threat of lower mental wellbeing due to AI and automation, comparing to non-conventional jobs. The results from Abeliansk and Beulmann (2019) study showed that employees with less interactive tasks are those that fear the most their remplacement by AI or automation. This impact appears to be driven by job security fears of people working in non interactive tasks (Abeliansk & Beulmann, 2019). Linking with the above discussion, Abeliansk and Beulmann (2019) have also related employees mental wellbeing with the fear of having lower wages and worse economic conditions in the future, this could be easily linked with low skilled workers who usually earn or fear of earning less money. This suggests that everything works in the reverse way too, an increased exposure to AI leads to individuals feeling less productive, job secured which in turn affects their overall mental health negatively (Abeliansk & Beulmann, 2019).

Results also from Schwabe and Castellacci (2020) study also alert that the employees fear that their job may well be supplanted by a keen machine within the future, is stronger for low skilled workers. In addition, for low skilled workers findings indicate that since they are those usually carry out routine based tasks and those who are mpre exposed to the risks of automation and AI replacement (Schwabe & Castellacci, 2020). This fear of future substitution does adversely influence workers' job satisfaction at present day once more (Schwabe & Castellacci, 2020).

Suseno, Chang, Hudik, and Fang (2021) in their study despite the fact that their research on AI anxiety refers to managers, their erguments should apply to all employees. The study initially released data that demonstrated that HR managers' beliefs about AI and AI anxiety had a critical impact on their preparation for change for AI adoption. The results showed that firstly, individuals with certain positive attitude towards AI are more likely to accept the change and adopt AI (Suseno, Chang, Hudik, & Fang, 2021). Concequently, those tho were less ready to adopt AI, experience higher levels of anxiety over AI (Suseno, Chang, Hudik, & Fang, 2021). Vice versa, AI anxiety of an individual

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is also likely to affect their readiness towards AI adoption (Suseno, Chang, Hudik, & Fang, 2021). To sum up, an individual's AI anxiety is most probably related to one's feelings towards AI.

Because AI has not yet replaced human labor on a wide scale, and only a few workers have been displaced by AI, anxiety about job replacement can be classified as vicarious exposure. On the other side of the coin researchers argue that the pro existence of computer anxiety may lead to a simpler ease of AI in the workplace. An increasing number of studies have shown that have revealed that computer related anxiety has gradually decreased (Y. O. Khasawneh Technophobia, 2018 as cited in Li & Huang, 2020). AI anxiety, like computer anxiety, causes learning anxiety, job replacement anxiety and the other sorts of anxieties; as a result, some people consider it to be the "evolution" of computer anxiety (Johnson & Verdicchio, 2017). Johnson and Verdicchio (2017) as well explained AI anxiety as fear and anxiety over AI losing control but at the same time, they denied the rationality of AI anxiety (Johnson & Verdicchio, 2017). Furthermore, Rhee and Jin (2021) verified that job uncertainty has a not significant moderating effect in the relationship between job anxiety of replacement and job satisfaction is not significant.

Possibly the greatest lesson we can acquire from the midcentury thinkers who worry about automation or AI, is that whereas there's cause for concern, there's no other way but forward (Akst, 2013). Whatever is that causes AI anxiety, organizations must ensure the readiness of employees to accept, trust and then implement AI in the workplace. Particularly, any organization seeking to implement a significant change as the adoption of AI, organizations must ensure that their employees are ready for change (Rafferty et al., 2013).

Acceptance of AI in the workplace

Many employees are, regardless their experience with AI anxiety, unwilling to accept AI and any technological progress, in contrast to others that are open to adopting the latest solutions because seeking new the opportunities these new technologies offer and are fascinated by AI and robotics, despite the anxiety they may experience. Employees' fears of losing their jobs because AI

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may replace human work is the man factor of negative views towards AI and the rejection of AI at the workplace, as literature suggests (Lichtenthaler, 2020). Employee attitudes about AI technology and their willingness to accept it are influenced by a number of factors, all of which may related to the new technology, the employee, the organization, the human–machine interface, the culture, as well as other more (Lichtenthaler, 2020).

Regardless the case, it is crucial to understand the employees' acceptance of AI in order to increase the chances of success with the introduction of AI in the workplace (Choi, 2021). Acceptance of AI by employees may not be just HR's concern but also organization's because performance gains are often hindered by users' unwillingness to accept and use available systems (Bowen, 1986 as cited in Davis, 1989). What causes people though to accept or reject information technology? Lichtenthaler (2020) divided the roots of negative attidude towards accepting AI technologies in five different sources, human, machine, interaction, evolution and environment.

The first factor affecting a human accepting or rejecting AI is the human themselves. Each individual's affinity toward a new technology and their convenience orientation (Lichtenthaler, 2020; Ittersum, et al., 2007), strictly speaking about a person's character, perception and attitude towards AI or any other new technology. Employee attitudes play a key role in the adoption of new technologies and there here has been a significant body of research exploring this topic (Lichtenthaler, 2020). Additional studies showed that new technologies will not be accepted unconditionally and may be subject to bargaining and conflicts. Results from a study by Abraham, et al. (2019) in addition to the attitude, revealed that tendency to reject the technology increases if it is going to be used to track performance. Moreover, the study results alert that acceptance is more likely if employees have positive attitudes towards the technology itself but also the use of it the workplace (Abraham, et al., 2019). Individual elements such as an individual's drive and ability, in combination with role clarity, are also significant in increasing AI acceptance (Choi, 2021).

Linking AI acceptance with AI anxiety discussed in the previous section, the results of a study by Abdullah and Fakieh (2020) showed that employees with a moderate level of acceptance of AI

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applications in their majority are concerned that AI will replace their work (Abdullah & Fakieh, 2020). Furthermore, is being realised by lots of people that AI has the potential to replace a lot of the work and earlier another study by Burgess (2017) explained the unwillingness of employees to accept and use these new AI technologies with the above realisation. Therefore, a recent study's findings explain the opposite. Perceived self-image and perceived usefulness partially mediate the intention to use AI (Dabbous, Barakat, & Sayegh, 2021), in contrast to the constant fear of replacement by a smarter machine.

The second root of negative attidude towards accepting AI is the machine or any new AI technology, even if it is not a machine. The machine or technology perceived as its usefulness and usability, as well as the machine part of the human–machine interface (Lichtenthaler, 2020; Ittersum, et al., 2007). In addition, the technology acceptance model suggests amongst with many factors that affect the decision about accept to use it or not, the usefulness of the new technology, but only as perceived by employees (Davis, 1989). Davis (1989) also distinguished the perceived usefulness of "the machine" and its perceived ease of use and concluded in the fact that both should be examining in order to introduce a new technology and employees accept the use of it. First, the perceived usefulness is defined as when the employees tend to use or not use an application to the extend, they believe it will help them perform their job better (Davis, 1989). Second, most important, employees may believe that a machine is useful, but at the same time, also believe that is too hard to use and that the advantages of usage are outweighed by the effort of using it (Davis, 1989). Wixom and Todd (2005) reinforce the above result making it clear that the quality of the machine and user satisfaction hold a critical role in accepting the use of new technologies in the workplace. An additional factor, concerning the use of the machine that affects AI acceptance, is accorging to Lee and Rha (2016) user awareness of privacy risks. Privacy concern is an essential factor affecting user acceptance of AI based technologies (Lee and Rha, 2016 as cited in Choi, 2021).

The third pillar in accepting AI is interaction of AI and employees. Whether employees voluntarily decide to use AI or is required to do so (Lichtenthaler, 2020) critically affects their

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attitude towards accepting AI. In addition, details on AI – employee interaction, for example whether the use of it will be a routine or not, adds on the acceptance of AI in the workplace, too. Lichtenthaler (2020) adds on the above the fact that, typically, employees that focus on rational decisions and pay attention on valid arguments are also open to use more advanced technology.

An also very important factor affecting AI acceptance is evolution (Lichtenthaler, 2020). One's experience with the AI, familiarity, understanding and knowledge about AI is vital to be able for an individual to accept it and therefore use it in the workplace (Lichtenthaler, 2020). The level of experience or knowledge regarding AI is differently affecting the acceptance of it. For example, in a study whose most respondents were aware of AI mediations and advantages in use in their field and some were already harnessing AI themselves, they also perceived disadvantages in accepting it (Ittersum, et al., 2007) knowing the high cost and lack of human touch.

Finishing the root causes of accepting or rejecting AI listed by Lichtenthaler (2020) is the employee environment. Employees' incentives, skills, and position in the organisation, in combination with the individual's social desirability of relying on new solutions (Lichtenthaler, 2020) complete the environment affecting employees decision to accept or reject the use of AI in the workplace. Dabbous, Barakat, and Sayegh (2021) with their recent study include organizational culture and habit with a positive impact on employees' intention to accept and use AI and job insecurity with a negative impact (Dabbous, Barakat, & Sayegh, 2021).

The differentiation of employees between skilled and unskilled workers, or highly, middle and low skilled workers distinguish many aspects of the employment (Schwabe & Castellacci, 2020). Automation technologies make up for highly skilled workers, as for middle skilled workers are those more negatively affected by routine biased technical change, because their tasks are comparatively the easiest to automate (Schwabe & Castellacci, 2020). As for low skilled workers, their tasks are often performed manual and require personal communication that are not that easy to transform yet (Schwabe & Castellacci, 2020). Therefore, it is an inevitable conclusion that this differentiation affects the acceptance of AI, having in mind how easy is for each one's task to be transformed. As

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confirmed also by Choi (2021), an employee's clarity of tasks, position in the organization, skills and AI's role in the task is impacting acceptance or rejection of AI in one's job or task.

It is noted by researchers that the association between user readiness to embrace and accept AI technology is strengthened by the trust associated to the use of AI based technology (Choi, 2021). More researchers add on the above, when users are aware of AI behaviour and trust it, they can accept it effortlessly (Hoffman & Novak, 2018; Upadhyay & Khandelwal, 2019). Furthermore, Sutrop (2019) suggested that the acceptance of the new technological product depends on trust in the innovating technology and its use and impact in the workplace (Sutrop, 2019).

It appears that implementing AI technologies in businesses will be impossible without the acceptance of employees. It is concluded that, in order to implement the use of AI in the workplace, businesses must ensure that employees also experience a high level of trust for AI. In this context, it is reasonable to believe that employees' trust in AI in the workplace is also one of the important elements affecting the level of this acceptance and as a result influencing the scale and efficacy of AI implementation and use in businesses (Łapinska, Escher, Górka, Sudolska, & Brzustewicz, 2021).

Trust in AI in the workplace

Lee and See (2004) defined trust as an attitude that supports individuals to accomplish their personal objectives in the face of uncertainty and fragility (Lee & See, 2004). Lots of terminology and comparable definitions are available regarding trust, that in some cases might be confusing. For example, the difference between trustworthy and reliable, people considered to be trustworthy have the power to betray us, whereas people considered to be reliable can only disappoint us (Baier, 1986; Holton, 1994; Wright, 2010). In addition, ideally, "those whom we trust will be trustworthy, and those who are trustworthy will be trusted" (Sutrop, 2019, p. 500), but this is not always the case. In this context, if people must trust AI, establishing and articulating the goal of achieving trustworthy AI is insufficient (Sutrop, 2019). We must also consider ways to build trust in AI, too (Sutrop, 2019).

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All authors that write about AI consider trust to be essential (Kuipers, 2018), as without trust, the implementation of AI in the workplace will not be successful. Trust is believed to be a foundational basis for AI, without it the economic and social benefits of AI will not be actualized (Kuipers, 2018), therefore the benefits and advantages of the use of AI will be nowhere to find. In the early stages of a relationship trust is very vital (Choi, 2021) and the adoption of a new technology is the initiation of a new relationship that needs to last. According to Lee and See (2004) trust in AI is what bridges the gap between the nature of AI and an individual's belief in its function and their intention to use and rely on it.

In the event of the appearance of AI, many papers have been published questioning the trust of people in AI and lead people not to. Joanna Bryson (2018) released a paper with the daring title "No One Should Trust Artificial Intelligence". Her argument is that no one can or should trust AI (Bryson, 2018). Furthermore, according to Bryson (2018), no human should have to trust an AI system, because AI is not a "thing" to be trusted. Kuipers (2018) points out that AI machines should be made trustworthy from scratch. In order to be trusted, individuals have unreasonable demands like the need to be designed to follow the social norms of our society, capable of genuinely taking responsibility for their actions (Kuipers, 2018).

Oppositely, initial studies with conversational AI showed that participants trusted a non-human chatbot more than a human controlled entity in various situations (Lucas, Gratch, King, & Morency, 2014). Therefore, gain and maintain trust in AI is not a self-deception. To begin with, Sutrop (2019) lists three needs in order to solve the issue with trust in AI. Providing trustworthy systems, choose trusted persons to run them and provide reliable systems in terms of data protection and ensuring data subjects' privacy, as well as user safety and security (Sutrop, 2019).

The European Commission's High Level Expert Group on AI published "Ethics Guidelines for Trustworthy AI" in April 2019, emphasizing that humans would only be able to fully benefit from AI if they have trust in it. According to the Guidelines, trustworthy AI is ethical, lawful, and resilient (EU Commission, 2021). Respect for human autonomy, prevention of harm, fairness, and explicability

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(EU Commission, 2021) are the four principles listed in the Guidelines and develop a “Trustworthy AI”. This should be a human centric approach based on respect on fundamental rights, applicable regulations and basic principles and values, ensuring an ‘ethical purpose’ and technical robustness and reliability (EU Commission, 2021).

According to Hengstler et al. (2016), trust in automation is built on three pillars: performance, process, and purpose. (Hengstler, Enkel, & Duelli, 2016; Lee & See, 2004). Firstly, developing operational safety and defining standards is important for establishing performance trust: "prior to use, a technology must be certificated and approved, and policies established to govern it," data security and privacy turned out crucial for all the cases (Hengstler, Enkel, & Duelli, 2016). Users are more likely to trust automation first if the algorithms are clear and assist them achieve their goals; second, if users are able to test the automation before initiation; and third, if the controls enabled are adapted to the people and the situation (Hengstler, Enkel, & Duelli, 2016). The third determinant of technological trust is purpose, which requires potential users to comprehend why an innovation was created and how it fits into their present lifestyle (Hengstler, Enkel, & Duelli, 2016).

Moreover, Coeckelbergh (2012) expands by explaining that individuals do not trust AI or robots depending on their cultural attitude towards AI technology in particular. Developing the idea behind that Coeckelbergh (2012) named six different aspects in which culture can affect an individual’s trust in AI, culture performance, the term “agent”, language use, freedom, social relations and human – technological existence. To begin with, whether or not an individual has motives to trust a robot is determined by the culture in which they belong to. There is the sense that cultures differ in terms of their values and how they see appropriate to reach those values (i.e., using technology or not, how technology is used, for which end, etc.). Secondly, in societies with a less individualistic culture, the term 'agent' may be less understandable. As a result, references to the term and a focus on rationality may be problematic in some cultures. Thirdly, cultures differ with respect to the way they express expectations, promises, and other aspects related to trust, their

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“moral language”. More on that, culture’s perception of individual freedom will alter how the technology must provide the sense of independence and so meet this condition. In addition, the level to which robots are integrated into the social fabric varies by culture. One might expect a higher level of trust in robots if they are already viewed and lived as part of society and culture. Lastly, it is expected greater trust in robots if a culture places less emphasis on the subject – object dichotomy and more focus on human – technological existence. (Coeckelbergh, 2012)

Employee trust in AI is a unique kind of trust in the broadest sense. It is a complex, multifaceted and multidimensional variable (Lewis & Weigert, Trust is a social reality, 1985). Łapinska, Escher, Górka, Sudolska, and Brzustewicz (2021) add in the trust in AI equation the variable of the organization. The findings of their study show that in the studied organizations, there is a positive association between general trust in technology and employees' trust in AI in the company, as well as a positive relationship between intra-organizational trust and employees' trust in AI in the company (Łapinska, Escher, Górka, Sudolska, & Brzustewicz, 2021). Intra-organizational trust is a critical component of a company's ability to implement strategic changes. (Morgan & Zeffane, 2003). The implementation of AI in the workplace can be defined as a strategic change. Employees' fear and uncertainty about the future are reduced by a high level of intra-organizational trust, which generates a favourable climate of change, acceptance and trust of the innovation coming through (Lewis & Weigert, The Social Dynamics of Trust: Theoretical and Empirical Research, 1985-2012, 2012).

Since the implementation of AI is a newly introduced topic in literature it is well established that in most cases, we assume that our understanding of employees’ trust in AI in the company is derived from the definition of trust in technology (Łapinska, Escher, Górka, Sudolska, & Brzustewicz, 2021). AI is also very difficult to measure directly, therefore available literature for technology is associated with AI, but in addition many researchers confirm that association (Lee & See, 2004). Trust in technology manifests itself in people's willingness to be affected by technology is a result of its usefulness, predictability of its effects, and the credibility of its suppliers (Mcknight, Crter,

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Thatcher, & Clay, 2011). A study refers to the concept of trust in technology consequently as trust in AI (Mcknight, Crter, Thatcher, & Clay, 2011), refers to the conviction that the other side of the relationship, i.e., technology (in this case, AI), will perform in a functional, helpful, and dependable manner, resulting in beneficial outcomes. The question of ethical regulation of emerging technologies is inextricably linked to general trust in technology. In terms of technology, ethical governance entails process transparency as well as product transparency (Wortham & Theodorou, 2017; Winfield & Jirotka, 2018). But ethics of the relationship is whole research itself and cannot be examined amongst other factors.

A paper by Ryan (2020) takes a different tack on this, arguing that AI cannot be trusted according to the most common definitions of trust because it lacks emotive states and the ability to be held accountable for its actions, both of which are requirements of the affective and normative accounts of trust. While AI fits all of the characteristics of the rational account of trust, it has been demonstrated that it is a sort of reliance rather than a type of trust. According to Ryan (2020) even clever robots like AI should not be regarded as trustworthy, as this diminishes the importance of interpersonal trust, anthropomorphizes AI, and shifts responsibility away from people who create and use it. As discussed, the definition difference between trust and reliance is explaining the reasoning of Ryan (2020) in his paper.

It is vital to remember that trust development is a dynamic process that involves moving from initial trust to ongoing trust and continuous trust development (Siau & Wang, 2018). The artificial intelligence's performance and purpose will determine whether or not people continue to trust it. AI applications that are simple to use and are dependable, that can collaborate and interface well with humans, have social ability, facilitate bonding with humans, provide good security and privacy protection, and explain the reasoning behind conclusions or actions, will aid in the development and maintain of trust (Siau & Wang, 2018). On the other hand, a lack of clarity about job replacement and displacement by AI, as well as AI's potential threat to humanity's existence, breeds distrust and impedes the building of ongoing trust (Siau & Wang, 2018).

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To conclude it is important to note that in order to understand and enable trust in AI amongst employees a holistic view is vital. Coeckelbergh (2012) reminds that the human need to be in control and in power does not necessitate trusting technology. What is left is the realization that, in order to truly comprehend what it takes for us to trust robots, we should not take the instrumental perspective of human – technology interactions and the individualist – constructivist view of trust and social relations for granted. A holistic view of both employees and technology perspective should be examined.

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Methodology

In this paper, I focused on exploring an under-researched topic in Cyprus, Artificial Intelligence (AI) in the workplace in Cyprus. More specifically this thesis is exploring AI anxiety, acceptance of AI and trust in AI in the workplace in Cyprus, from the employee perspective. This is a broad and preliminary examination of these three specific topics, whose link with many factors discussed in the literature will be further explored for employees working in Cyprus. Each one of the topics require more detailed examination and many more topics regarding AI in the workplace exist to explore in the future. In addition, this is an employee perspective, for a holistic and complete research the business perspective should also be examined. Therefore, this thesis is a generalized survey on the topic that wishes to reinforce existing literature and trigger researchers for more extensive and detailed surveys on the topic.

I intended to collect primary data myself, descriptive data by gathering observations without intervening, using a self-completion questionnaire. Since my aim was to produce more generalizable knowledge about AI in the workplace, a quantitative experimental study using a questionnaire was the chosen research methodology. If more detailed research was required to answer these preliminary research questions, a more carefully designed study under controlled conditions that can be replicated by other researchers would have been used. Human Resources is a field that this research methodology is very usual when in need to provide with generalized knowledge for a research topic, especially when little data are available to work with.

The selection of the sample was performed using probability sampling, the decision was made in regard to the research aim. Probability sampling requires the researcher to choose samples from a larger population using a method based on the theory of probability. Random participants selection with probability sampling allows researchers to make strong statistical inferences about the whole population. A random sample is meant to be an unbiased representation of the larger population in the case of a very large population. Since the population for the research is considered

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a quite large number, the people that work in Cyprus are over 400.000, random sampling it is considered a fair way to select a sample from a larger population.

The research complied with all relevant ethical regulations regarding human research participants. Every participant was informed for the use of the data and consented since the participation in the questionnaire was completely voluntary and participants could leave the study at any time, withdrawing their participation. The questionnaire was prepared in Google Forms, and it was shared mainly with the help of social media and by words of mouth communication, in order to get as much as possible, the chance for every individual subject of the population to have an equal chance of getting selected. The questionnaire was shared publicly on Facebook, LinkedIn, Instagram and through personal communication via Messenger, Viber and e-mails. The questionnaire was one for everyone, it consisted of standardized questions, carefully and precisely worded for all three main variables examined in order to be considered reliable and valid. All the information and data required from the questionnaire are based on established theory and findings of previous studies from the literature discussed above.

The survey was conducted between February and March 2022. The questionnaire was communicated via the platforms, and it was accessed only online electronically on Google Forms. The questionnaire was communicated to people that work in Cyprus and this was the only selection criterion for participation in the survey. Each participant was able to answer the questionnaire in their own time, the completion of the questionnaire would not take more than 10 minutes. The participation was completely voluntary, anonymous and each participant could withdraw from the study at any time and terminate their participation. The questionnaire was available to accept answers for about 4 weeks and everyone who had been shared with had the chance to complete it during that period of time.

The survey questionnaire was available in English and Greek and consisted of 11 main questions, from which one of them consists of 29 statements, regarding participants' personal information, details about their current job position and their opinion on main topics of the survey.

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Most of the questions regarding personal and employment information were multiple choice and all the other questions were measured on a 5-point Likert scale, measuring the participants' opinion on the main topics of the survey. Most of the variables were assessed with one proposed statement, in contrast a set of statements was proposed for each of the main variables to ensure the validity of the results. To each statement participants were asked to respond by selecting a specific response category on a 5-point Likert scale ranging from 1 to 5, with 1 representing "Strongly disagree" to 5 "Strongly agree". The full questionnaire is available in the Appendix.

The aim was to conduct the survey with 250 respondents at least, trying to capture by probability sampling, a variety of fields, occupations, and ages. The total answers collected, by the end of the four weeks, were 264. Considering only the people who have been communicated personally the questionnaire, the response rate was estimated around 50%. After the questionnaire was shared on platforms like Facebook and LinkedIn the response rate was not possible to be estimated. In total 150 women (56.8%) and 114 men (43.2%) successfully completed the questionnaire. The majority of the participants were Cypriots, only 9 participants did not have Cypriot nationality but were working in Cyprus. Participants aged between 26 to 35 held the 46.2% of the total participants, 21.6% of the participants aged between 18 to 25, 19.3% between 36 to 45, 11.4% between 46 to 59 and only 1.5% were above 60 years old. The greater part of the participants holds a university degree, many of them a master's degree, too, on the contrast to a rather significant amount of 15.5% with only up to high school education level. Demographics show a quite representative sample in terms of industries of occupation, although the highest percentages of participants come from business, pharmaceutical, technology, education and services. Job positions are quite representative of a holistic company model, since more than half the participants (60.2%) are employees, and all the other levels have representative percentages amongst the sample.

The questionnaire included 28 variables in total. The questionnaire starts by examining the independent variables (factors) which will be examined for correlation with the main variables, personal and employment information about participants and all the other factors derived from

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literature. The main variables tested, as dependent variables, were five and related to AI in the workplace, job replacement anxiety within the company and within one's position, acceptance of AI within the company and within one's position, and trust in AI in the workplace. All main variables included in the survey are theoretical and hypothetical constructs with unobserved realizations in a given sample based on a set of identifiable variables. For this purpose, a set of 4 statement for each variable, was proposed in the survey questionnaire. In the course of the measurement, respondents were asked to respond to these statements by selecting a specific response category on a 5-point Likert scale ranging from 1 to 5, with 1 representing "Strongly disagree" to 5 "Strongly agree".

Before the analysis, as soon as the questionnaire was closed, all gathered data were prepared. Each participant when withdrawing from the survey the whole questionnaire dropped and their participation was not submitted no incomplete questionnaires were gathered. All the questions were required to submit a completed questionnaire form; therefore, no missing data were gathered as well. No participants or data points were excluded from the analysis. The data set was not initially checked for outliers. As mentioned, all data were used and further observation for outliners was conducted during data analysis. All data were extracted from the questionnaire in Microsoft Excel and data process and transformation was performed. All variables, main, independent, dependent, etc., which were gathered as part of a Likert scale were transformed to numbers from 1 to 5. All multiple-choice questions' answers, whose transformation to continuous variables was applicable, were also transformed accordingly. The rest were used as categorical variables and where was applicable as dummy variables.

Primarily, a pilot test was carried out with one participant to establish the total time needed to complete the questionnaire and confirm that all questions and statements are easily understandable. Secondary a sample with 5 participants was collected and a dummy analysis was performed using statistical software R. R is a language and environment for statistical computing and graphics. The dummy analysis revealed some flaws of the initial questionnaire form. Some variables were not adding significance on the study and were extracted, and some statements were better

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articulated. After reviewing the questionnaire, the 5 participations were deleted. A secondary pilot test was carried out with 3 other participants to confirm the total time needed to complete the questionnaire and confirm that all questions and statements are easily understandable. The questionnaire was then available to accept responses for the data gathering.

The collected data were analysed using statistical software R. The main analysis was conducted using basic statistics and simple linear regression aiming to obtain indication in significant correlation between the main variables (dependent variables) and all the examined factors (independent variables). As main variables are determined the following, job replacement anxiety (caused by AI), AI acceptance within the company and within one's position and trust in AI all considered in the workplace in Cyprus. The minimum confidence interval for statistical analysis was chosen to be 95% in order to consider a variable statistically significant in the tested models. A simple linear regression between all the factors in combination with the three main variables was conducted and all the correlation coefficients were extracted. The analysis using simple linear regression was conducted with factors that could be transformed to continuous variables. All categorical variables were examined in correlation with the main variables using a side-be-side box plot for each combination individually. After initial analysis, all statistically significant variables were used in multiple linear regression models to check the impact of the consideration of all statistically significant variables combined. In addition, some models were created based on the already examined literature on the topics using categorical variables or dummy variables. All the results were extracted from the R software and are presented in the next section in tables, plots, and charts. More detailed analysis of the actual results is also presented in the next section.

A questionnaire produces results that can be generalized beyond the sample group, but they do not provide a more in-depth understanding of participants' perceptions, motivations and emotions. Questionnaires are helpful in gathering information that is unique to individuals, such as general knowledge, beliefs, attitudes, and behaviours. In addition, they are useful when resources are limited, and it can be relatively inexpensive to gather data from many people in short time.

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Often in a questionnaire, both open and closed questions can be used to collect data. Therefore, compared to other research methods different kinds and large amount of data can be collected with low spending of money and time. Moreover, questionnaires are helpful in maintaining participants' privacy because participants' responses can be anonymous. This is especially important when gathering sensitive information or an individual's opinion, beliefs, attitudes, especially when it comes to their own job and employment.

Therefore, it can be concluded that the approach that was taken for this survey was justified and reasonable. The results of the survey using questionnaire quantitative research will contribute to new knowledge and understanding, up to a point. Since this is preliminary research, I do not seek to deeply and detailed examine each individual, therefore qualitative research with maybe interviews, observations or focus groups would be worthless. This paper aims to be a stimulus point to initiate research on the AI in the workplace and more detailed research methods should be used then. At this point, any limitations or weaknesses in the chosen approach are outweighed by the strengths regarding the aim of this research.

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Results – Findings

This section will present all the results, raw or modified and all the findings gathered from analysis of the completed questionnaires data. All Tables and Figures are gathered in the Appendix. Tables 1 and 2 present the demographic characteristics and all the employment information in statistics for all the 264 participants of the study.

Preliminary information and descriptive statistics about the participants are detailed in the Tables 1 and 2. Those constitute the first 9 variables that will be used for further analysis in R. Gender, nationality, industry of occupation, job position and job nature were used in their original form as categorical variables in the following analysis. On the other hand, age, education salary and seniority were transformed and used as continuous variables, since the content allowed transformation to numbers in corresponding scale from 1 to 8. The variable job position was used both as categorical and as continuous variable, but when used as variable the entries with "freelancer" as job position were excluded from analysis, in the scope of representing the hierarchy within a company.

The rest 19 variables were measured with the 5-Likert scale and were transformed to continuous variables with the numbers 1 to 5 (1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree), so as to be ready for further analysis. As previously mentioned, no other data were excluded from analysis and no missing data were found, since all the questionnaire parts were required to submit a final input.

At this point, it is crucial that the main variables are distinguished. Five variables were selected as the main – depended variables in the models created and examined in the following analysis. Those five are job replacement anxiety – in general, job replacement anxiety – concerning the participant's own position, AI acceptance in the company, AI acceptance in the participant's own position and trust in AI in the workplace.

The first part of the analysis included association of the main variables with the categorical variables (gender, nationality, industry of occupation, job position and job nature) with the use of

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side-by-side box plots to correlate categorical variables with continuous variables. Figures 1 to 25 present all the box plots extracted from R associating the main continuous variables with all the categorical ones.

Using the R statistical program, single linear regressions were performed for every combination of all the continuous variables (independent variables) with each of the main ones (dependent variables). For each statistical test, as null hypothesis was selected that the correlation coefficient is equal to zero and there is no relationship between the two variables. Tables 3 and 4 present the correlation coefficients for all the statistical tests performed, and for each statistical test the p-value is highlighted to support the conclusion of which variables are considered statistically significant.

Correlation coefficients are indicators of the strength of the linear relationship between two different variables. A linear correlation coefficient that is greater than zero indicates a positive relationship, whereas a correlation coefficient value that is less than zero signifies a negative relationship. A correlation of – 1 indicates a perfect negative correlation, and a correlation of 1 indicates a perfect positive correlation. The initial confidence interval was chosen 95%, therefore correlations with p-value less than 0.05 were considered significant. During the analysis p-values less than 0.01 were also highlighted since they indicate significant correlation with 99% confidence interval. Correlations extracted from the statistical tests with p-values less than 0.001 are generally considered statistically significant and the exact p-value is not considered substantial.

Simple linear regression summaries were extracted from the statistical tests for all the models created. Residuals and coefficients (intercept and slope of the model line) along with their standard error, t-value and p-value were extracted. In addition, residual standard error, multiple R-squared, adjusted R-squared, F-statistic and p-value were also extracted from R. The residual standard error and the multiple R-squared are values to determine how well a model is fitting the data. F-statistic and p-value are used to determine the statistical significance of correlations, both values can be used but the most commonly used is the p-value, as described above.

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As seen on the Tables 3 and 4, factors with significant correlation with the main variables are mostly correlated with confidence interval more than 99% (p-values<0.001). Some differences are observed in the statistical significance confidence interval of some correlations.

After initial single linear regression analysis, for every main variable, a multiple linear regression was performed included all the factors. Analysis was performed with the main variable as a dependent variable and all the factors as independent variables. Therefore, five models were extracted, and correlation coefficients are presented in Table 5. All models were of the same structure as equation 1. For this stage, all participants' records listed as freelancers (Job position – factor / variable) were excluded from analysis, in order to represent hierarchy in a company and reflect the initial single linear regression models from which those logs were excluded. Correlation coefficients and statistical significance obtained from the single linear regression for each factor differ from those extracted with a multiple linear regression when considering all variables together in the same model.

$$y = i + a \cdot x_1 + b \cdot x_2 + c \cdot x_3 + \cdots \textbf{\textit{(Equation 1)}}$$

Where,

y: the dependent variable

i: the line intercept

a, b, c, ...: correlation coefficients

x_1, x_2, x_3 ...: factors as independent variables

Figure 26 presents the participants' perception on what kind of AI anxiety they experience. These data were gathered from the last question of the survey questionnaire, aiming to capture the participants' perception on AI anxiety in their workplace. As previously mentioned, it was initially decided that the rest of the questionnaire focuses on job replacement anxiety caused by AI, since it is the number one anxiety discussed in available literature (PEW Research Center, 2017; Vrontis, et al., 2021). The regarding question was a required multiple-choice question where participants were

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allowed to choose more than one option. Even if employees' perception was that they did not experience AI anxiety, an answer to the question was required to force them chose the closest to what kind of anxiety they believe AI could cause to them personally. As the Figure 1 confirms the relevant literature, privacy violation anxiety seems to be the second in line but in significant preference amongst participants' answers. It is significant that all kinds of anxieties were mentioned by more than 20% of the participants.

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Discussion

In this section, a discussion of the results obtained in the previous section takes place. Results were separated for categorical and continuous variables. Unfortunately, results were not able to be combined from categorical and continuous variables. Therefore, when combining all variables in analysis, factors listed as categorical variables are not considered. Analysis was made separately for each one of these factors, and consequently results can only be discussed separately for each factor, in contrast to factors transformed to continuous variables that could be used in various model combinations.

For starters, the first categorical variable tested for its effect on the main variables was gender using the help of boxplots in R. Job replacement anxiety in general and specifically for one's position was tested in terms of the gender of the participant. For general job replacement anxiety, no difference is observed between the median for male and female, yet for males' job general job replacement anxiety seems to be distributed throughout the scale from 1 to 5. When it comes to their own position females experience lower job replacement anxiety, whereas male participants' job replacement anxiety varies from 1 to 5 with a median slightly above female one. This confirms literature by Abeliansk and Beulmann (2019), which refer to males are more likely than females to experience job replacement anxiety explained by the higher possibility for automation or AI to be used for tasks mainly performed by males. For AI acceptance in the workplace, no difference was observed, from data analysis, between males and females. The median for males and females' trust in AI, was found the same, however the overall data shifted to 5 for females and to 1 for males. Demonstrating that female participants tend to have more trust in AI in the workplace.

Most of the participants were Cypriots, only 9 participants had different nationality, therefore the sample for nationality was not considered representative and reliable to draw any conclusions. As Coeckelbergh (2012) explains, individuals do not trust AI depending on their cultural attitude towards AI technology in particular, whether or not an individual has motives to trust a robot is determined by the culture in which they belong to. In any case, no significant difference is

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observed for any of the main variables (neither job replacement anxiety, AI acceptance and trust in AI in the workplace), between participants with Cypriot nationality compared to those not originally from Cyprus.

Results relating industry with the main variables, indicate severe variability. Many industries are represented in the sample but not all industries have a well representative sample, therefore the reliability of the outcome is tentative because not all industries' results are comparable. Nevertheless, some observations were made. The results show no significant observation since general low job replacement anxiety appears in military and agriculture, in contrast to high general job replacement anxiety for the food industry and pharmaceuticals. Remarkable is that when shifting to job replacement anxiety regarding the participant's position for all the industries a shift to lower job replacement anxiety is observed. This comes in contrast to literature that suggests that human workers when considering the prospect of losing their own job do not want to be replaced by machines (Granulo, Fuchs, & Puntoni, 2019).

In terms of AI acceptance in the company and within one's position again no significant results are observed between the industries. High AI acceptance within one's position is observed in finance industry, while lower than the midpoint AI acceptance is observed only for sports and media industry. Trust in AI seems similar within industries based on the results, for all industries median appears to be around the midpoint, only for Finance appears to be a little higher than the rest. In addition, it was observed that data had no significant variability, while the median is probably identical to the first and third quartile and they overlap. This phenomenon tends to happen when large proportion of identical data exists.

Moving to the last of the factors studied as categorical variables, job position and job nature, the data provided evidence that job replacement anxiety is very high for workers and employees with manual jobs. Literature comes to agree with the fact that job replacement anxiety is stronger for low skilled workers (Schwabe & Castellacci, 2020), or for employees with conventional jobs, carrying out routine and less interactive tasks (Abeliansk & Beulmann, 2019). For all job positions

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results suggest job replacement anxiety is around the midpoint and slightly above, while when job replacement anxiety concerns their own position, lower job replacement anxiety is observed. It is remarkable that following manual job nature high job replacement anxiety is observed for customer service and service providing positions, which agrees with previously mentioned literature, but also it is observed for scientists and employees using creativity for their job, which comes in contrast to existing literature finds. For all jobs nature it is once again observed lower job replacement anxiety when concerning participants' own position.

Within different job positions and jobs with different nature, no significant difference is observed for AI acceptance in the company or within one's position. It is once again observed lower AI acceptance when concerning participants' own position. Regarding trust in AI, data point out that workers tend to have less trust in AI in the workplace, while for all the other positions the median of the data is at the midpoint. It is also observed that data had no variability, probably large proportion of identical data exists. Trust in AI in the workplace is also lower for manual jobs, while for other job's nature data show no differentiation.

The following step of data analysis included regression analysis in R, using all continuous variables, starting with one-by-one linear regression models. For each of the main variables' correlation with the discussed factors was conducted separately. As for job replacement anxiety and AI acceptance, the variables were separated regarding the company in general and the individual's position. This separation targeted in better understanding of employees' perception of the main topics discussed and address any differences that may be identified when one's own job position is on the front line.

The results for job replacement anxiety correlation with all the factors suggest no correlation with position seniority and AI acceptance in the workplace. Moreover, no correlation is observed between job replacement anxiety and trust in AI, but a significant negative correlation with trust in AI in the workplace does. Between job replacement anxiety in general and for job position no other significant differences are identified, except the confidence intervals of correlations may differ in

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some cases. A negative correlation with confidence interval more than 99% for job replacement anxiety, both general and for one's position, is identified with one's perceived usefulness, career development opportunities, trust in the company, and technology knowledge, use and trust. That would mean that the lower the participant's perceived usefulness, career development opportunities, trust in the company, and technology knowledge, use and trust, the higher their job replacement anxiety is. Additionally, it was found that the weaker the participant's attitude is towards AI as well as the higher their anxiety for working with AI is, the higher the job replacement anxiety they experience is.

As already discussed, according to Abeliansk and Beulmann (2019) and Schwabe (2019, as cited in Schwabe & Castellacci, 2020) the perceived threat of AI replacement is highest within the youngest group of participants. Whereas from this research results suggest that job replacement anxiety is highest as the age of the participants increase, with 95% confidence interval for general job replacement anxiety and more than 99% for position job replacement anxiety. Brougham and Haar (2018) explain the dependence on age found by the other researchers on awareness of AI. Point confirmed by the current study, as negative correlation with more than 99% confidence interval for AI knowledge and AI familiarity with job replacement anxiety is established.

Findings of the study demonstrate that the lower the participant's job satisfaction is the higher the fear of job replacement is. Granulo, Fuchs, and Puntoni (2019) in their study identified the fear of job replacement by AI technologies crucial because it negatively affects employees' job satisfaction at present. Running the regression with job satisfaction as the dependent variable, correlation and coefficients are the same, drawing the conclusion that job replacement anxiety can negatively affect job satisfaction, but also low job satisfaction can cause job replacement anxiety.

Looking at available literature many researchers associate low mental wellbeing due to job replacement anxiety with employees carrying out routine tasks (Schwabe & Castellacci, 2020) or with less interactive tasks (Abeliansk & Beulmann, 2019) and especially for low skilled workers (Castellacci, 2020). Those findings can be confirmed by the current studies' findings where a

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negative correlation is found by the data, with more than 99% confidence interval, between job replacement anxiety with job position and education. As lower in the company hierarchy and as low is the participant's education level, the higher the job replacement anxiety is. In addition to that, strengthening the perception around low skilled workers, data from this research revealed a positive correlation with confidence interval more than 99% with the fear of participants that more skills would be required from them with job replacement anxiety. The above can easily be linked with lower wages and lower job security, whose correlation with job replacement anxiety is described by a negative coefficient with 95% confidence interval and more than 99%, respectively. Literature also agrees that fear of job replacement is caused by job security fears of people working in non-interactive tasks and fear of having lower wages (Abeliansk & Beulmann, 2019).

Lastly, in terms of job replacement anxiety, as Suseno, Chang, Hudik, and Fang (2021) found employees who experience higher levels of anxiety over AI are those who are less ready to adopt AI. Data collected for the present study revealed negative correlation between AI acceptance in the company and general job replacement anxiety and positive correlation of AI acceptance in position with job replacement anxiety for one's position. The positive correlation for the participants' position is in contrast to the available literature and the expected.

The study's findings for AI acceptance in the workplace first off showed no correlation neither for acceptance in the company neither in position with age, job position, salary, position seniority, and trust in the company. Some differences were identified between AI acceptance in the company and AI acceptance in position variables. For instance, a significant positive correlation was identified for AI acceptance in the company with education, job satisfaction, perceived usefulness, career development opportunities and negative with anxiety feelings towards working with AI; but no correlation at all was identified with AI acceptance in position. Moreover, for AI acceptance in position positive correlation was identified with job security, and fear of required skills; but no correlation at all was identified with AI acceptance in the company in general. The correlations were

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expected derived from available literature studied, the identified differences between the two variables are noticeable.

The main reason discussed in literature (Lichtenthaler, 2020; Abdullah & Fakieh, 2020; Burgess, 2017) as the reason for negative views towards AI and the rejection of AI at the workplace, is employees concern that AI will replace their work. Findings of the current study indicate negative correlation of AI acceptance in the company with job replacement anxiety general, which agrees with literature. And as discussed above, a positive significant correlation is identified for AI acceptance in position with job replacement anxiety for one's position. This positive correlation is in opposition to literature, since it indicates that the higher the anxiety one is experiencing for AI replacement the higher the tendency to accept AI in one's position.

Furthermore, each individual's affinity towards AI technology is directly dependent on a person's character, perception and attitude towards AI or any other new technology (Lichtenthaler, 2020; Ittersum, et al., 2007); the usefulness of the new technology, but only as perceived by employees (Davis, 1989); and one's experience with the AI, familiarity, understanding and knowledge about AI (Lichtenthaler, 2020). Results of the study confirm literature with positive significant correlation of AI acceptance in the workplace (company and position) with AI knowledge, AI familiarity and attitude towards AI, as well as with technology knowledge, use of technology and trust in technology. Indicating that for the participant's ability to accept and therefore use AI in the workplace, is vital to be fully aware and familiar with first off technology in general and then AI technology itself.

Perceived usefulness in the company by the employees contributes to high AI acceptance in the company with more than 99% confidence interval, but no significant correlation for AI acceptance within one's position. Perceived self-image and perceived usefulness partially mediate the intention to use AI such as also literature suggests (Dabbous, Barakat, & Sayegh, 2021). Additionally, literature adds to the above factors, organizational culture and habit with a positive impact on employees' intention to accept and use AI and job insecurity with a negative impact

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(Dabbous, Barakat, & Sayegh, 2021). While the present study's results showed no significant correlation of AI acceptance in the workplace with trust in the company. For AI acceptance in the company positive significant correlation was revealed by the data with career development opportunities, with 99% confidence interval, and with job security, with 95% confidence interval. Studies also included employees' incentives, skills, and position in the organisation (Lichtenthaler, 2020; Choi, 2021) as well as employee's clarity of tasks (Schwabe & Castellacci, 2020) to complete the environment affecting employees' decision to accept or reject the use of AI in the workplace or one's job or task. Findings demonstrate no significant correlation of employees' salary and job position with AI acceptance in the company or one's job position. A significant correlation with 99% confidence interval is identified for AI acceptance in the company only with education, which can relate to discussed literature above.

Lastly, it is noted by researchers that the association between user readiness to embrace and accept AI technology is strengthened by the trust associated to the use of AI based technology (Choi, 2021; Hoffman & Novak, 2018; Upadhyay & Khandelwal, 2019; Sutrop, 2019). Case confirmed by the data of the study, which provided evidence that trust in AI and trust in AI in the workplace have a significant correlation with more than 99% confidence interval with AI acceptance both in the company or one's job position.

The last of the main variables examined was trust in AI in the workplace. The participants' data for trust in AI in the workplace provided evidence that no significant correlation exists for salary and attitude towards working with AI, for the rest of the factors' correlations were identified of statistical significance.

Positive association between general trust in technology and intra-organizational trust with employees' trust in AI in the company is identified by studies (Łapinska, Escher, Górka, Sudolska, & Brzustewicz, 2021). In addition, Lewis and Weigert (2012) a high level of intra-organizational trust, which generates a favorable climate of change, acceptance and trust of the innovation coming through benefits trust in AI in the workplace (Lewis & Weigert, The Social Dynamics of Trust:

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Theoretical and Empirical Research, 1985-2012, 2012). The results of the present study agree with all the above arguments, a positive correlation with significance more than 99% confidence interval is identified between participants' trust in the company and trust in AI in the workplace. The positive correlation of trust in AI in the workplace comes also with AI knowledge, AI familiarity and attitude towards AI. Moreover, trust in technology, as well as technology knowledge and use of technology, appear to have a positive correlation with trust in AI in the workplace. The positive intra-organizational climate referred in literature can be confirmed by the positive correlation with 99% and above confidence interval of trust in AI in the workplace with job security, job satisfaction, perceived usefulness, and career development opportunities.

Siau and Wang (2018) also refer to AI's potential threat to human's job position, breeds distrust and impedes the building of ongoing trust to AI in the workplace. Data from the study's participants confirm that with the negative correlation with fear of job replacement anxiety and fear of more skills required by participants with trust in AI in the workplace. In addition, a positive correlation of AI acceptance with trust in AI in the workplace, reinforce the above discussion. Siau and Wang (2018) add also that AI applications that are simple to use and are dependable, that can collaborate and interface well with humans, have social ability, facilitate bonding with humans, provide good security and privacy protection, and explain the reasoning behind conclusions or actions, will aid in the development and maintain of trust. Linking the above finding with the main AI anxiety caused to employees, according to study's findings, except of the elimination of job replacement anxiety, privacy violation, safety and regulation, learning and last social anxiety will aid in the development and maintain of trust in AI in the workplace.

More factors affecting trust in AI in the workplace identified by the study are age and position seniority with a negative correlation and education and job position with a positive correlation.

Ending the analysis, when multiple regression models run in R with the study's data, different coefficients and statistical correlation were identified for the main variables. For instance,

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for general job replacement anxiety negative correlation was identified with education and job satisfaction and positive correlation with technology knowledge, anxiety feelings towards working with AI and fear of more skills required by the employees. Undoubtedly, when one by one independent variables were tested, more significant correlations were identified with the tested factors. The significant correlations identified with the multiple variables model were common as with the one by one regressions, with the same correlation direction; except the technology knowledge factor which with the complex model comes in contrast to the expected according to literature. The complex model suggests that as technology knowledge increases within a participant so does and their anxiety for job replacement. For participants' job position replacement anxiety, negative correlation is identified with salary, and AI knowledge and positive correlation with anxiety attitude towards working with AI, required more skills fear and AI acceptance in their position. All significant correlations are identified with common factors as with one by one regressions, and all with the same correlation direction.

For AI acceptance in the company, the multi-variable regression model suggested negative correlation with trust in the company, trust in technology, and anxiety attitude towards working with AI, and positive correlation with use of technology, attitude towards AI, required skills fear, AI acceptance in participants' position and trust in AI. Most of the factors identified are common as with the one-by-one regression with the same direction. Positive correlation of trust in technology and attitude towards AI was identified with one-by-one regression. The second one fits better with available literature findings with the multiple-variables model, while the first one does not agree with literature expectations of the study. Furthermore, no correlation was identified between AI acceptance in the company with trust in the company and required skills fear with the one-by-one regression. For AI acceptance in one's position, multiple variable regression, revealed only positive correlation with job security, job replacement anxiety for one's position and AI acceptance in company. All significant correlations are identified with common factors as with one by one regressions, and all with the same correlation direction.

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For trust in AI in the workplace, multiple variable regression identified negative correlation with position seniority and job replacement anxiety for one's position, and positive correlation with AI familiarity, anxiety attitude towards working with AI, skills required fear, and trust in AI. Most significant correlations are identified with common factors as with one-by-one regressions, and all with the same correlation direction. The exception for this variable is identified where for anxiety attitude towards working with AI, no correlation is found with trust in AI in the workplace with one-by-one regressions and skills fear required was negatively correlated with trust in AI in the workplace, which was the expected from literature findings.

It is established that whereas single linear regression has one independent variable impacting the slope of the relationship, multiple regression incorporates multiple independent variables. Independent variable in multiple regression has its own coefficient to ensure each variable is weighted appropriately. Therefore, if there are other predictor variables, all coefficients will be changed, the t-statistic and p-value will change, if for no other reason than the joint variance of the dependent variable will be different for each case. All the coefficients will be jointly estimated for each case, so every new variable changes all the other coefficients already in the model change. It is also notable that the multiple linear regressions produce more representative slopes, by comparing the adjusted r squared numbers. For multiple linear regressions adjusted r squared numbers are higher than 0.5, while for the single linear regressions are less than 0.5.

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Conclusions

Closing up this research, I have successfully provided an initial overall understanding of the employee perspective about AI in the workplace in Cyprus. The present study provided preliminary data on how employees in Cyprus perceive the use of AI in their workplace, regarding specific variables in association with specific factors. Literature lack of data regarding AI in the workplace in Cyprus. This is a topic that can be explored further, new insights can be brought to the equation and different approaches can be performed. Going back through the literature review – secondary data, everything available in the literature in regard to other nationalities and countries, was successfully aligned with the primary data gathered from the present study.

This paper focused on going via the employee perspective through some basic factors affecting job replacement anxiety caused by AI, AI acceptance and trust in AI in the workplace. While collecting primary data with a generalized questionnaire lacked detailed analysis and complete picture of the issues, this approach provided more data in less time providing with the big picture of the under-researched issues in Cyprus. This research clearly illustrated factors affecting the under study topics regarding employees in Cyprus and how; but also raised the question for further analysis of those topics in association with more factors, but also more topics regarding AI in the workplace in Cyprus.

Point by point the main findings for each of the main variables of this study regarding AI in the workplace in Cyprus, are associated with the relevant literature findings for workplaces all around the globe. Findings using one-by-one single linear regression and multiple-variable regression were combined to come up with the following conclusions. First and foremost, it is vital to realize that the main factors affecting the main variables are themselves that will always be linked as a circle. Job replacement anxiety will affect and AI acceptance in the workplace and both will affect employees' trust in AI in the workplace, and vice versa.

In terms of job replacement anxiety, both literature and study findings agree that the main pillar always identified linked with job replacement anxiety is employees' education, and job position

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if this is proportionated with their education. Low skilled and low-level educated employees, performing manual jobs and routine tasks tend to show high levels of job replacement anxiety, explained by the higher possibility for automation or AI to be used for their job position (Schwabe & Castellacci, 2020). Consequential, negative correlation of job replacement anxiety with wages is consistent. In addition, employees with high levels of fear that more skills will be required by them, experiencing anxiety towards working with AI, the higher the job replacement anxiety they experience is. Moreover, higher level of job replacement anxiety is observed amongst employees with low perceived usefulness, career development opportunities, and trust in the company. A crucial factor for job replacement anxiety is job satisfaction, the higher the fear of job replacement the lower the employee job satisfaction is, and vice versa. A conflict was observed between multiple and single regression results, positive correlation was found with the first and negative with the second was found. Literature suggested that the highest the knowledge on the technology the lower the job replacement anxiety is. Lastly, in terms of job replacement anxiety, employees who experience higher levels of anxiety over AI are those who are less ready to adopt AI and have less trust in AI in the workplace.

With respect to acceptance of AI in the workplace, the difference identified between AI acceptance in the company in general and AI acceptance in one's position, are remarkable. While for example a negative correlation is identified between AI acceptance in the company and general job replacement anxiety; positive correlation is identified between AI acceptance in one's position and job replacement anxiety for that position. This divergence opens the door to further and more detailed future research on association of job replacement anxiety and AI acceptance in the workplace in Cyprus; while existing literature suggested that high job replacement anxiety prevents employees to accept and use AI in the workplace. While the study's results with one-to-one regression showed no significant correlation of AI acceptance in the workplace with trust in the company, negative correlation was identified with multiple-variable regression. Furthermore, some of the main factors identified with both regression models with significant correlation with AI

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acceptance in the workplace are attitude towards AI, anxiety feelings towards working with AI, job security, fear of more skills required, technology knowledge, use and trust. At last, results and literature come to agree with the association between user readiness to embrace and accept AI technology and trust in AI.

Regarding trust in AI in the workplace, mainly positive influence of general trust in technology and AI along with intra-organizational trust to employees' trust in AI in the workplace. Single linear regression models gave results of significant correlation of trust in AI in the workplace with almost all the factors studied. Multiple-variable regression confirmed correlation of trust in AI in the workplace with position seniority in the company, AI familiarity, attitude towards AI and attitude towards working with AI, as well as job replacement anxiety. Finally, results associating the fear of employees that more skills will be required from themselves suggest both negative and positive correlation with trust in AI in the workplace. Literature does not associate directly these variables, the association though of the fear of more skills required with job replacement anxiety, should consequently negatively correlate fear of more skills required with trust in AI in the workplace.

Since everything discussed reflect the employee perspective; it is clear that organizations should build a plan and a strategy, engage and partner everyone in the process when implementing AI in the workplace. In order to account for issues and opportunities raised by AI ethics, the organization needs to understand the employee perspective thoroughly. Consequently, employee processes (onboarding, performance reviews, incentive structures) and resources (intranet, managers) need to be updated. This is just an observation on my own general conclusion on the research findings; this is not a thesis that aims to consult organizations on how to handle AI introduction in the workplace in Cyprus, just to explore and provide a preliminary image on the employee perspective. O'Brien says, "The world is changing because of this technology, so we need to change too" (Etlinger, 2019). AI is still an emerging discipline, and no one has all the answers.

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Listening to others, educating yourself and your organization, and experimenting quickly are all important.

Academia Implications

At the end of the present study several limitations have been revealed. To begin with, the questionnaire design for the present research is conducted based on academic literature review. Since this is part of a thesis for a postgraduate program and the resources are limited, my research might not have identified all academic peer reviewed, therefore I most probably have not composed the complete picture and this study might have disregarded the possible influence of other variables. More variables could have been examined, more factors affecting those variables. After reviewing the results of the questionnaire answers the questionnaire design might have been biased in some categories, where not all industries or natures of work for example were incorporated. Moreover, not complete understanding of the results is obtained since the analysis was limited to correlation with the available literature and not all combinations were statistically tested, more complex analysis might have revealed more data.

Moreover, since all resources are limited, so was the time which the questionnaire was accessible to participants to complete the survey and limited number of participants was able to participate in the research. Future research should look to develop the sample size. In addition, when a sample is not representative and the selection is random, it comes with a higher risk of sampling error. In general, as already discussed, the larger the population target to be studied the more difficult representative sampling can be and it can be especially difficult for an extremely large population. Dealing with large populations can also be difficult to obtain the desired members for participation. Future research should look to develop the sample size, invest more resources and find out ways to achieve a more representative sample. A representative sample is a small subset group that seeks to proportionally reflect specified characteristics exemplified in a target population.

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Representative samples often yield the best results, but they can be the most difficult type of sample to obtain.

This study has collected data from individuals that work in Cyprus and most of them with Cypriot citizenship. Therefore, the applicability of the present study and validity is very narrow, the case for other countries and cultures is unknown. Future studies may also consider other cultures as well, as different groups may react differently to AI in the workplace.

Managerial Implications

In terms of actions needed to be taken by Cypriot organisations, to handle AI in the workplace effectively, the present study revealed useful information to be considered. Attention should mainly be driven towards low skilled and low-level employees that appear to experience higher level of job replacement anxiety and therefore less readiness to embrace and accept AI technology and finally trust AI. In addition, it is vital that the organization towards to ensure job satisfaction amongst the workforce and trust at first the organization. Further, based on the conclusions of the study, vital factors are considered the technology and AI knowledge, awareness, and familiarity. Accordingly, organizations must educate their workforce, ensure knowledge and awareness on the new technology, in order to handle the incorporation of the new technology within the organization.

Future Research

Except the improvements suggested for this present research based on the implications discussed, as repeatedly suggested this is preliminary research to provide more generalized knowledge, which should be examined further. More specifically this thesis is exploring job replacement anxiety caused by AI, acceptance of AI and trust in AI in the workplace in Cyprus. This is a broad and preliminary examination of these three specific topics, each three of them require more detailed examination and many more topics regarding AI in the workplace exist. Moreover, more

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main variables regarding AI in the workplace are suggested for future research, such as human – AI collaboration, productivity, and many more. In addition, this is research completely based on employee perspective and perception of all variables included, for a holistic and complete research the business perspective is also suggested for future research.

Table 6

Summarized conclusions

	Variables with significant correlation
Job replacement anxiety	Education, Salary, Job position, Job nature, Job satisfaction, Attitude towards working with AI, Required skills fear, Perceived usefulness, Career development opportunities, Trust in the company, Technology knowledge, **AI acceptance**, **Trust in AI**
AI acceptance in the workplace	**Job replacement anxiety**, Trust in the company, Attitude towards AI, Anxiety feelings towards working with AI, Job security, Fear of more skills required, Technology knowledge, use and trust, **Trust in AI**
Trust in AI in the workplace	General trust in technology and AI, Position seniority, **Job replacement anxiety**, AI familiarity, Attitude towards AI, Attitude towards working with AI, Required skills fear

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Appendix

Questionnaire: Artificial Intelligence in the workplace in Cyprus

Artificial intelligence (AI) is described by researchers as a "different class of machines", machines that can perform a simulation of human intelligence processes, tasks requiring human reasoning, judgement, and perception. Artificial intelligence can also be considered the most advanced form of technological development to date. In addition, it can be linked with computers, robotics, automation, and the list goes on.

This questionnaire is part of my MSc thesis in Human Resources Management at the University of Cyprus. The questionnaire aim to explore the employee viewpoint towards the use of Artificial Intelligence (AI) in the workplace in Cyprus.
If you work in Cyprus, please take 10 minutes and complete this questionnaire for my dissertation. Your participation is completely voluntary, anonymous and you may withdraw from the study at any time.

Thank you in advance for your time

* Required

Please complete the questionnaire with your own personal information, details about your current job position and your opinion on main topics of the questionnaire. Do not forget that your participation is completely voluntary, anonymous and you may withdraw from the study at any time.

1. Gender *

Mark only one oval.

- ◯ Female
- ◯ Male
- ◯ Other

2. Nationality *

Mark only one oval.

- ◯ Cypriot
- ◯ Other: _____

3. Age group *

Mark only one oval.

- ◯ Less than 18
- ◯ 18 - 25
- ◯ 26 - 35
- ◯ 36 - 45
- ◯ 46 - 59
- ◯ 60+

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4. Education *

Mark only one oval.

- ◯ Up to primary school
- ◯ Up to secondary school
- ◯ Up to high school
- ◯ Diploma holder
- ◯ University graduate
- ◯ Master's Degree
- ◯ Professional title
- ◯ PhD
- ◯ Other: _____

5. Choose the industry that you work in *

Mark only one oval.

- ◯ Aviation
- ◯ Arts
- ◯ Business
- ◯ Construction
- ◯ Education
- ◯ Engineering
- ◯ Law
- ◯ Media
- ◯ Medical
- ◯ Military
- ◯ Public Sector
- ◯ Service
- ◯ Sports
- ◯ Technology
- ◯ Other: _____

6. Choose what describes best your position in the company that you work *

Mark only one oval.

- ◯ Freelancer
- ◯ Worker
- ◯ Employee
- ◯ Supervisor
- ◯ Manager (any level between supervisor and top management)
- ◯ Top management
- ◯ Company owner
- ◯ Other: _____

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7. Choose what describes best the nature of your work (you can choose more than one options) *

Check all that apply.

- [ ] Manual job
- [ ] Administrative tasks
- [ ] Customer service
- [ ] Scientist
- [ ] Decision making
- [ ] Problem solving
- [ ] Providing services
- [ ] Creativity

Other: [ ] _____

8. Choose the category that your monthly gross salary belongs to *

Mark only one oval.

- ◯ Less than 850€ (Part time job)
- ◯ 850 - 1200 €
- ◯ 1201 - 1500 €
- ◯ 1501 - 2500 €
- ◯ Over 2500 €

9. Choose the group that your seniority at your position and/or company belongs to *

Mark only one oval.

- ◯ Less than a year
- ◯ From 1 to 5 years
- ◯ From 5 to 10 years
- ◯ From 10 to 15 years
- ◯ More than 15 years

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10. Choose your level of agreement to each statement from strongly agree to strongly disagree, as seen below (There are 5 choices if they do not appear scroll your screen) *

Mark only one oval per row.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I am completely satisfied with my job	◯	◯	◯	◯	◯
I feel 100% secure at my job position, my job is permanent	◯	◯	◯	◯	◯
I feel very useful within the company. I feel that I contribute to the maximum to the company's goals	◯	◯	◯	◯	◯
I fully trust my company	◯	◯	◯	◯	◯
In my company, activities are undertaken aimed at substantive support for employees (e.g., training, mentoring)	◯	◯	◯	◯	◯
I have full knowledge about technology	◯	◯	◯	◯	◯
I use technology in my everyday life	◯	◯	◯	◯	◯
I fully trust technology	◯	◯	◯	◯	◯
I have full knowledge about Artificial Intelligence (AI) and its consequences and capabilities	◯	◯	◯	◯	◯
I am familiar with Artificial Intelligence (AI)	◯	◯	◯	◯	◯
Artificial Intelligence (AI) is a very useful technology that already helped a lot and will help the next years	◯	◯	◯	◯	◯
I am worried that Artificial Intelligence (AI) will replace many people's work	◯	◯	◯	◯	◯
I feel anxious working with Artificial Intelligence (AI)	◯	◯	◯	◯	◯
I think my job could be replaced by Artificial Intelligence (AI)	◯	◯	◯	◯	◯

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I am personally worried that what I do now in my job will be able to be replaced by Artificial Intelligence (AI)					
I am personally worried about my future in my company due to Artificial Intelligence (AI) replacing employees					
I am worried that if Artificial Intelligence (AI) is part of our everyday work more skills will be required from me					
I am willing to accept Artificial Intelligence (AI) technology in the company					
I am willing to accept Artificial Intelligence (AI) technology in my job and position					
Some of the company's operations would be easier to perform with Artificial Intelligence (AI)					
My job would be easier to perform with Artificial Intelligence (AI)					
Producers of artificial intelligence (AI) are reliable (they have the knowledge and resources necessary to implement solutions)					
Producers of artificial intelligence (AI) are honest					
Producers of Artificial Intelligence (AI) have a good reputation					
Producers of Artificial Intelligence (AI) have good will and offer customers the best possible solutions					
The Artificial Intelligence (AI) solutions used in my company are safe					
The Artificial Intelligence (AI) solutions used in my company are reliable					

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I can rely on Artificial Intelligence (AI) solutions used in my company	⬭	⬭	⬭	⬭	⬭
The use of Artificial Intelligence (AI) solutions in my company is intuitive	⬭	⬭	⬭	⬭	⬭

11. In your own perception what kind of anxiety is Artificial Intelligence (AI) most making you feel (you can choose more than one option) *

Check all that apply.

- ☐ Job replacement anxiety
- ☐ Privacy violation anxiety
- ☐ Safety and regulation anxiety
- ☐ Learning anxiety
- ☐ Social anxiety

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Tables and Figures

Table 1

Demographic Characteristics of the Participants

Characteristic	n	%
Gender		
Female	150	56.8
Male	114	43.2
Nationality		
Cypriot	255	96.6
Other	9	3.4
Age		
18 – 25	57	21.6
26 – 35	122	46.2
36 – 45	51	19.3
46 – 59	30	11.4
60^{+}	4	1.5
Education		
Up to high school	41	15.5
University student	2	0.8
Diploma holder	17	6.4
University graduate	102	38.6
Master's degree	94	35.6
Professional title	7	2.7
PhD	1	0.4

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Table 2

Employment Information of the Participants

Characteristic	n	%	Characteristic	n	%
Industry of occupation			**Job position**		
Business	54	20.8	Freelancer	16	6.1
Pharmaceutical	47	17.8	Worker	44	16.7
Technology	23	8.7	Employee	159	60.2
Service	22	8.4	Supervisor	17	6.4
Education	21	8.0	Manager (any level)	17	6.4
Medical	17	6.3	Top management	7	2.7
Engineering	15	5.7	Company owner	4	1.5
Construction	13	4.9	**Job nature**		
Public sector	13	4.9	Manual job	61	23.1
Arts	9	3.4	Administrative tasks	53	20.1
Law	5	1.9	Customer service	54	20.5
Banking	5	1.9	Providing services	99	37.5
Sports	4	1.5	Scientist	27	10.2
Military	3	1.1	Decision making	49	18.6
Food	3	1.1	Problem solving	94	35.6
Aviation	2	0.8	Creativity	35	13.3
Media	2	0.8	**Salary**		
Finance	2	0.8	Less than 850 €	18	6.8
FinTech	1	0.4	850 – 1200 €	115	43.6
Agriculture	1	0.4	1201 – 1500 €	45	17.0
Marine	1	0.4	1501 – 2500 €	56	21.2
Position seniority			Over 2500 €	30	11.4
Less than a year	52	19.7			
From 1 to 5 years	115	43.6			
From 5 to 10 years	44	16.7			
From 10 to 15 years	5	9.5			
More than 15 years	28	10.6			

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Table 3

Correlation coefficient matrix (N=264)

Factors	Age	Education	Job position	Salary	Position seniority	Job satisfaction	Job security	Perceived usefulness	Trust in the company	Career development opportunities	Technology knowledge	Use of technology	Trust in technology
Job replacement anxiety – General	0.13*	-0.41***	-0.35***	-0.21***	0.09	-0.37***	-0.13*	-0.40***	-0.26***	-0.35***	-0.15*	-0.29***	-0.36***
Job replacement anxiety – Position	0.21***	-0.45***	-0.43***	-0.31***	0.17**	-0.46***	-0.14*	-0.49***	-0.39***	-0.46***	-0.33***	-0.44***	-0.48***
AI acceptance in the company	-0.04	0.16**	0.10	0.05	-0.08	0.25***	0.03	0.20***	0.11	0.19**	0.25***	0.31***	0.30***
AI acceptance in position	0.02	0.03	0.01	0.04	-0.01	0.07	0.14*	0.03	0.02	0.05	0.19**	0.14*	0.17**
Trust in AI in the workplace	-0.18**	0.25***	0.29***	0.08	-0.21***	0.50***	0.20**	0.40***	0.46***	0.51***	0.45***	0.39***	0.50***

**p≤0.05*

***p≤0.01*

****p≤0.001*

All the other statistical tests have failed the significant correlation test with p-value>0.05.

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Table 4

Correlation coefficient matrix (N=264)

Factors	AI knowledge	AI familiarity	Attitude towards AI	Attitude towards working with AI	Job replacement anxiety – General	Job replacement anxiety – Position	Required skills fear	AI acceptance in the company	AI acceptance in position	Trust in AI	Trust in AI in the workplace
Job replacement anxiety – General	-0.29***	-0.29***	-0.20**	0.50***	-	0.56***	0.58***	-0.14*	-0.00	-0.07	-0.13*
Job replacement anxiety – Position	-0.51***	-0.44***	-0.28***	0.47***	0.56***	-	0.73***	0.02	0.22***	-0.01	-0.26***
AI acceptance in the company	0.26***	0.30***	0.53***	-0.23***	-0.14*	0.02	0.02	-	0.67***	0.55***	0.32***
AI acceptance in position	0.13*	0.15*	0.31***	-0.06	-0.00	0.22***	0.18**	0.67***	-	0.47***	0.29***
Trust in AI in the workplace	0.58***	0.58***	0.42***	0.02	-0.13*	-0.26***	-0.17**	0.32***	0.29***	0.48***	-

$p \leq 0.05$

$p \leq 0.01$

$p \leq 0.001$

All the other statistical tests have failed the significant correlation test with p-value>0.05.

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Table 5

Multiple linear regression models

Factors	Dependent variables				
	Job replacement anxiety – General	Job replacement anxiety – Position	AI acceptance in the company	AI acceptance in position	Trust in AI in the workplace
	coefficients				
Age	0.03	0.14	0.12	-0.05	0.01
Education	-0.15**	-0.07	0.03	-0.03	-0.03
Job position	-0.09	-0.11	0.06	-0.00	0.02
Salary	0.08	-0.14*	-0.04	0.09	-0.05
Position seniority	-0.13	-0.07	-0.04	-0.01	-0.11*
Job satisfaction	-0.18*	-0.08	0.09	-0.10	0.07
Job security	-0.06	0.03	-0.04	0.12**	0.02
Perceived usefulness	-0.12	-0.13	0.01	-0.04	-0.05
Trust in the company	0.13	-0.00	-0.12*	-0.02	0.09
Career development opportunities	-0.07	0.04	0.04	-0.02	0.06
Technology knowledge	0.20*	0.00	-0.10	0.11	0.05
Use of technology	0.01	-0.12	0.24***	-0.06	-0.10
Trust in technology	-0.08	0.04	-0.17**	0.07	0.06
AI knowledge	0.12	-0.22*	-0.05	0.08	0.11
AI familiarity	-0.03	0.16	0.05	-0.08	0.16*
Attitude towards AI	0.12	0.10	0.35***	-0.04	-0.06
Attitude towards working with AI	0.29***	0.33***	-0.19***	-0.02	0.17**
Job replacement anxiety – General	-	0.10	-0.04	-0.06	-0.01
Job replacement anxiety – Position	0.12	-	0.01	0.17***	-0.14**
Required skills fear	0.25***	0.35***	0.11*	0.03	0.11*
AI acceptance in the company	-0.08	0.02	-	0.59***	0.03
AI acceptance in position	-0.11	0.28***	0.46***	-	0.13
Trust in AI	0.13	0.14	0.27***	0.09	0.23***
Trust in AI in the workplace	-0.03	-0.23**	0.03	0.13	-

$p \leq 0.05$
**$p \leq 0.01$*
***$p \leq 0.001$*

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Figure 1

Job replacement anxiety – general Vs Gender

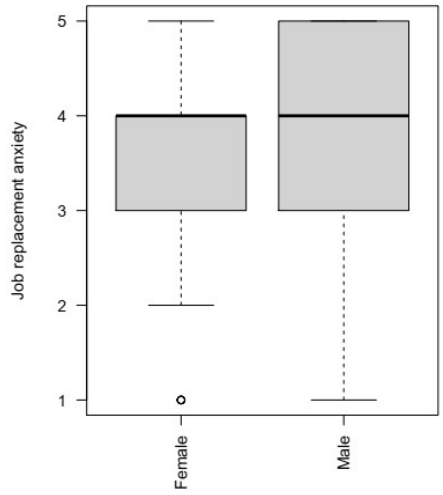

Figure 2

Job replacement – position Vs Gender

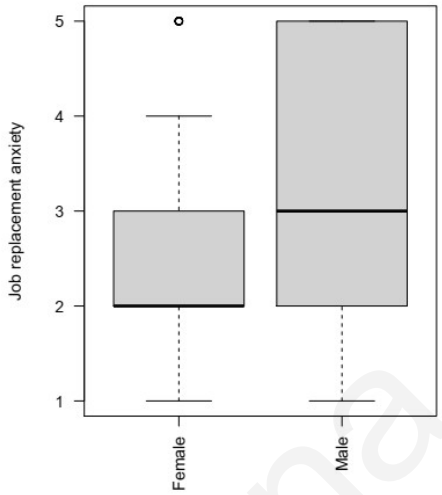

Figure 3

AI acceptance in the company Vs Gender

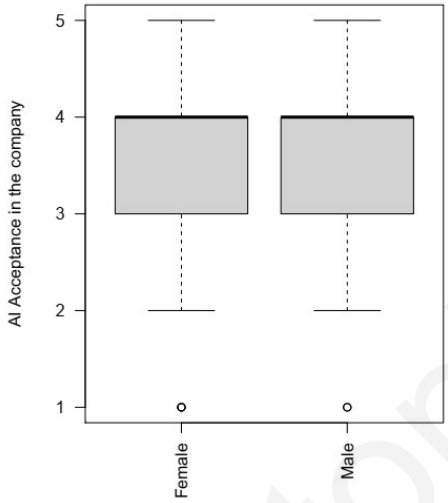

Figure 4

AI acceptance in position Vs Gender

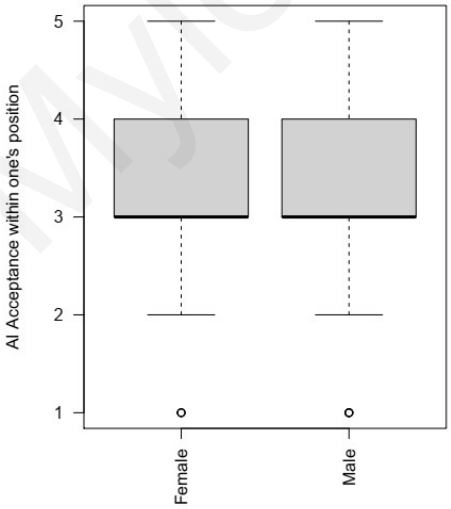

Figure 5

Trust in AI in the workplace Vs Gender

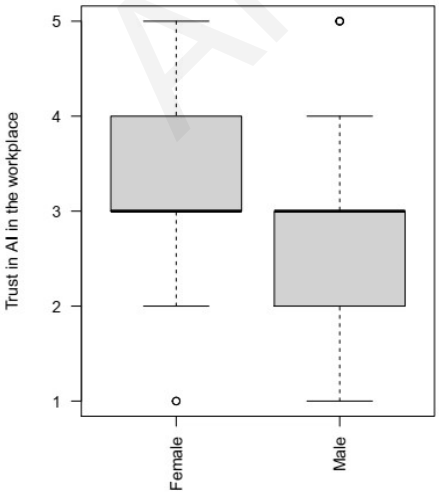

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Figure 6

Job replacement anxiety – general Vs Nationality

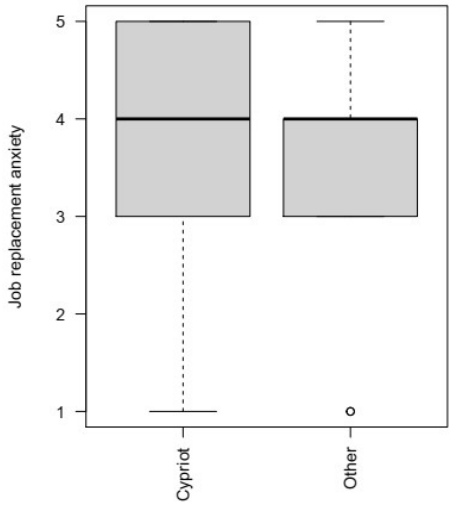

Figure 7

Job replacement anxiety–position Vs Nationality

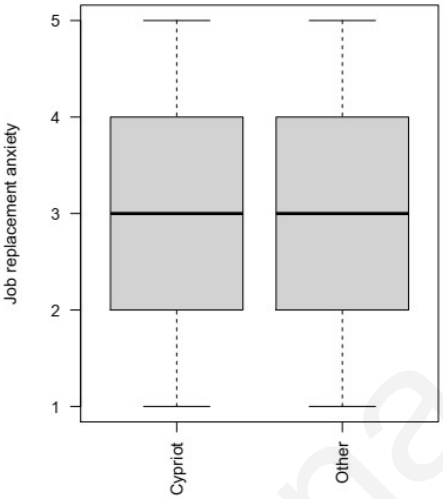

Figure 8

AI acceptance in the company Vs Nationality

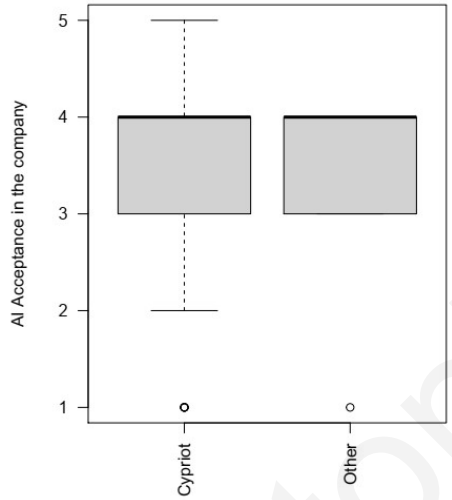

Figure 9

AI acceptance in position Vs Nationality

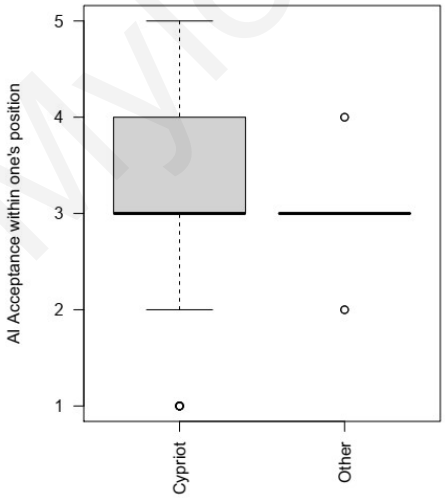

Figure 10

Trust in AI in the workplace Vs Nationality

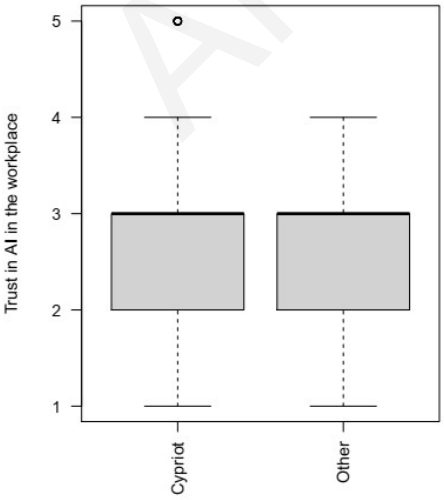

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Figure 11

Job replacement anxiety – general Vs Industry

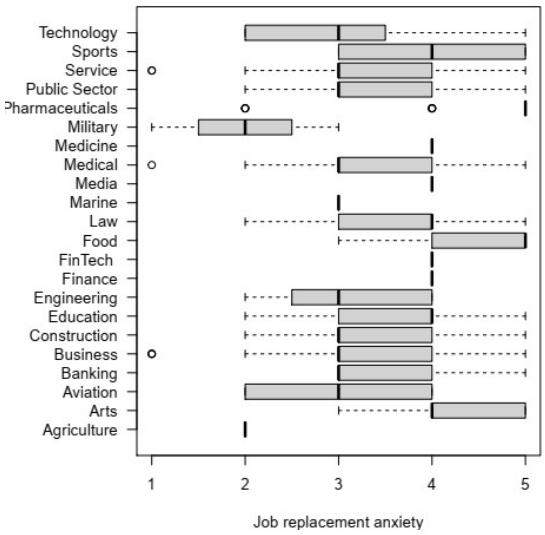

Figure 12

Job replacement anxiety – position Vs Industry

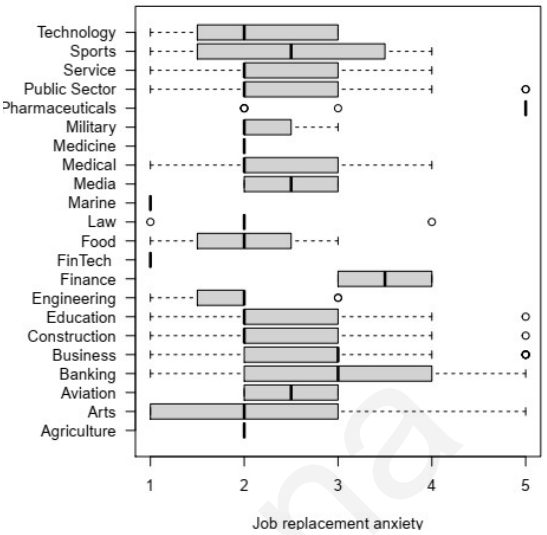

Figure 13

AI acceptance in the company Vs Industry

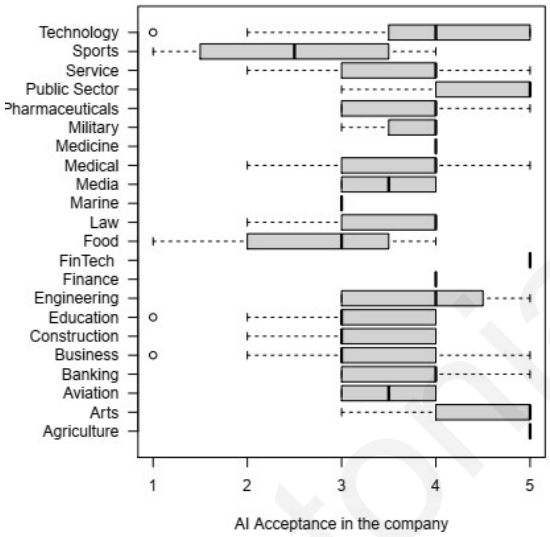

Figure 14

AI acceptance in position Vs Industry

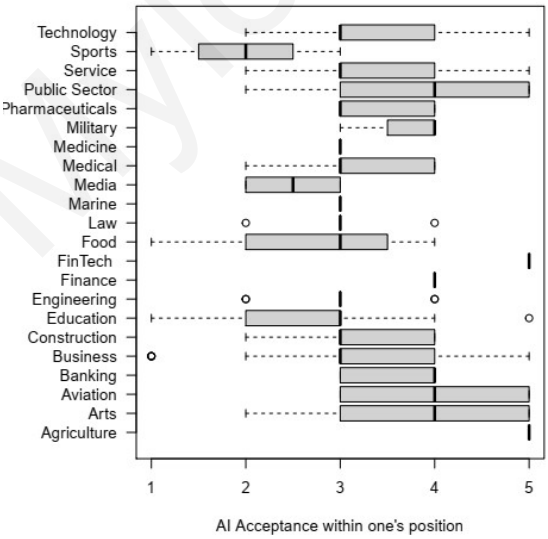

Figure 15

Trust in AI in the workplace Vs Industry

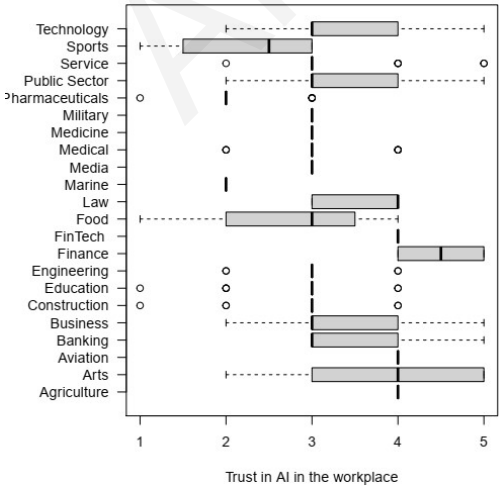

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Figure 16

Job replacement anxiety Vs Job position

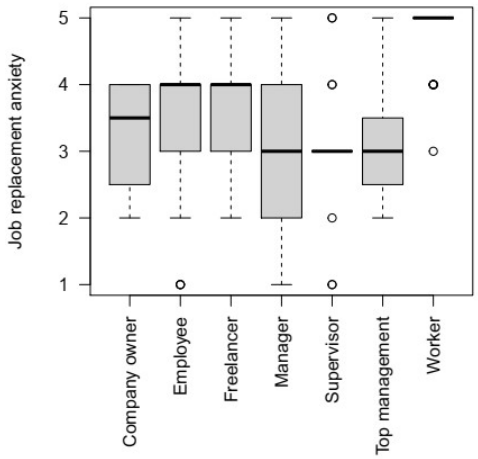

Figure 17

Job replacement anxiety – position Vs Job position

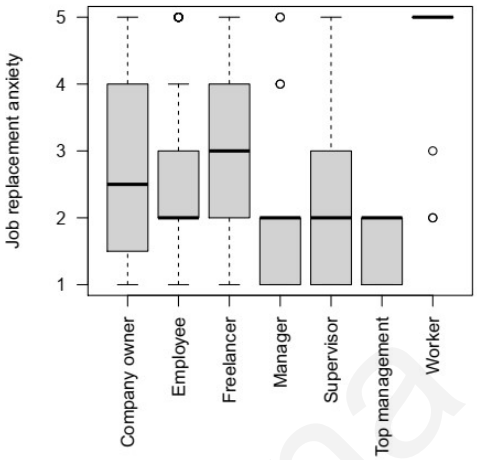

Figure 18

AI acceptance in the company Vs Job position

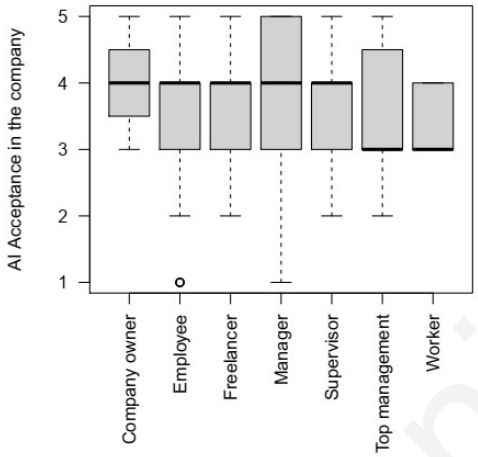

Figure 19

AI acceptance in position Vs Job position

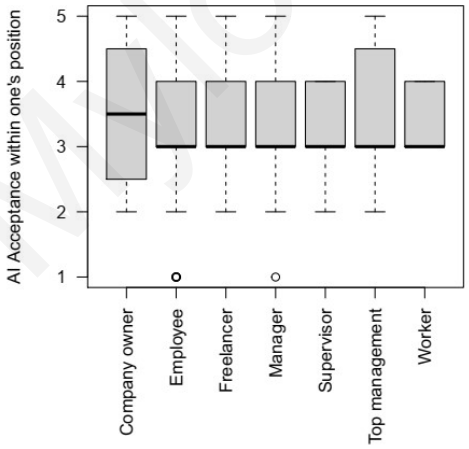

Figure 20

Trust in AI in the workplace Vs Job position

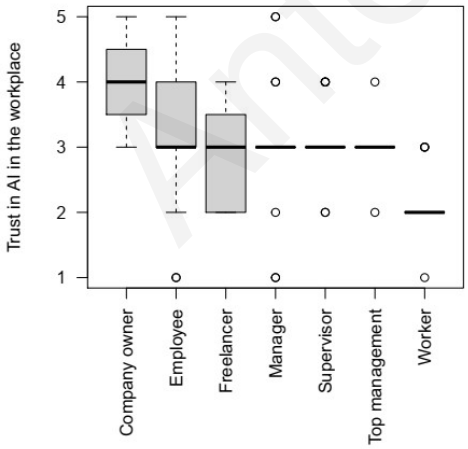

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Figure 21

Job replacement anxiety Vs Job nature

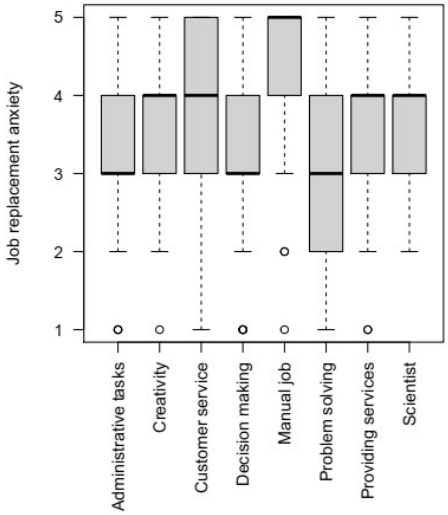

Figure 22

Job replacement anxiety – position Vs Job nature

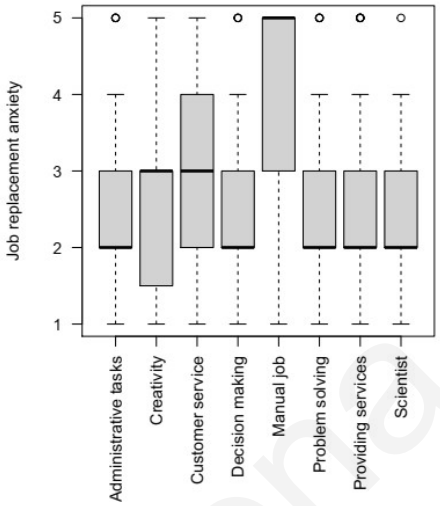

Figure 23

AI acceptance in the company Vs Job nature

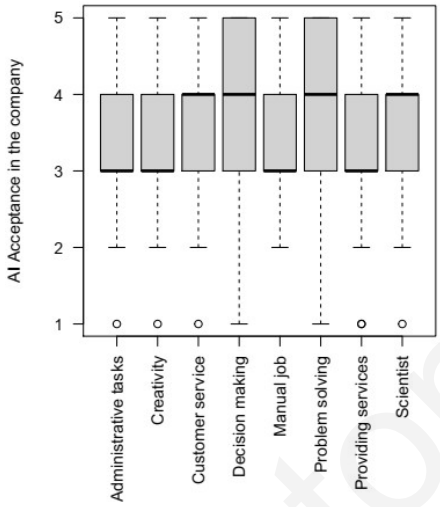

Figure 25

AI acceptance in position Vs Job nature

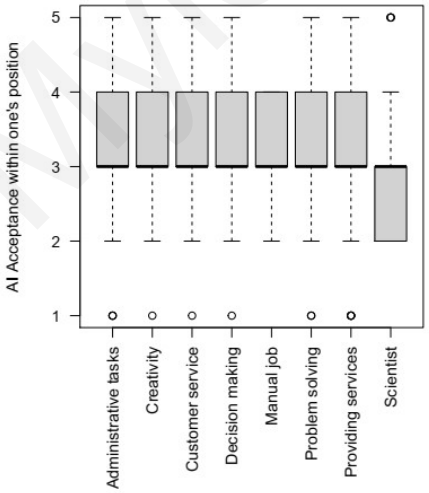

Figure 24

Trust in AI in the workplace Vs Job nature

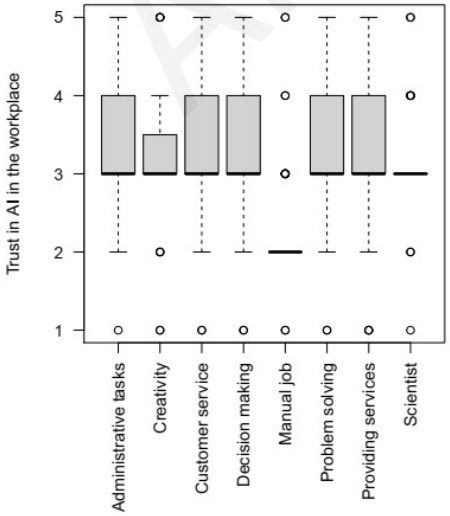

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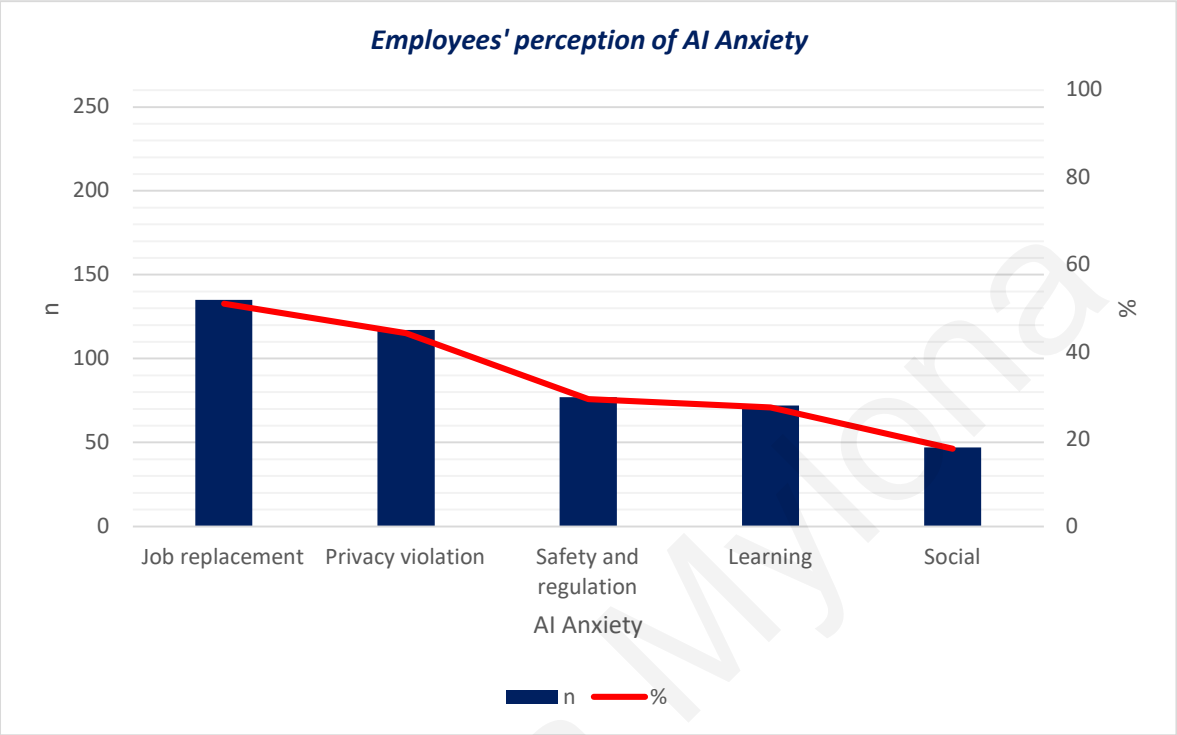
Figure 26

Employees' perception of AI anxiety



Antonia Myona