# Artificial Intelligence Anxiety Among University Students and Academics: The Case of Batman University

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 **Abstract — This study examines the levels of artificial intelligence (AI) anxiety among academic staff and students at Batman University. Data were collected from 500 academic personnel and 500 students using the Artificial Intelligence Anxiety Scale (AIAS) and analyzed through descriptive statistical methods, including t-tests and ANOVA. The study focused on demographic variables such as gender, age, academic field, and years of experience. The findings indicate that male academic staff experienced higher levels of AI anxiety, particularly in job change, sociotechnical blindness, and AI structuring. Less experienced academics also reported elevated anxiety. In the student group, females and those studying in social sciences showed higher anxiety, with the highest job change anxiety detected among the 17–25 age group. These results suggest that AI anxiety varies significantly across demographic categories. The study emphasizes the need for targeted awareness and training programs within academic institutions to support adaptation to AI technologies.**

 *Keywords:* **Academician, Anxiety, Artificial Intelligence, Student.**

 *Index Terms*—**Enter key words or phrases in alphabetical order, separated by commas.**

## I. INTRODUCTION

T he concept of artificial intelligence was first addressed in a proposal presented at the Dartmouth Conference in 1956 by John McCarthy, Marvin L. Minsky, Nathaniel Rochester, and Claude E. Shannon. However, it is believed that the person who coined the term is John McCarthy [1]. The development and evolution of artificial intelligence have followed a parallel trajectory with the advancement of computers, particularly transistors. Nevertheless, the notion that artificial intelligence is confined solely to computer technology is incorrect. AI is directly related to many disciplines, ranging from medicine to engineering, industry to psychology, and it is shaped according to the needs of each discipline. Additionally, when AI is viewed from a philosophical perspective, the role of machines in controlling life is also debated [2]. The rapid development of AI technologies in recent years and their permeation into every aspect of daily life have caused various anxieties among university students and academics. These concerns manifest in many areas, such as job security and the quality of education. Both students and academics face uncertainty about the future effects of AI. One of the most common concerns among students is the potential difficulties in finding employment after graduation. AI and automation technologies have the potential to replace human labor in many sectors. This situation creates anxiety, particularly among students studying in fields such as engineering, information technologies, and healthcare. According to a study, 67% of university students believe that AI will negatively affect their job-seeking processes [3].

According to John McCarthy (2007), artificial intelligence is a field of science and technology that produces intelligent machines and computers. Based on this definition, artificial intelligence has been integrated into information technologies through intelligent machines that perform a wide range of tasks, mimicking human cognitive functions [4]. From the perspective of academics, the impact of AI on teaching methods and academic work is also a significant source of concern. Specifically, the use of AI-supported tools in student evaluation processes raises doubts about how objective these evaluations are. Additionally, ethical issues related to the use of AI in academic publications have emerged. For instance, the use of AI in academic writing processes has sparked new debates concerning originality and plagiarism [5]. The impact of AI on education and research is a significant concern. When AI-supported tools are used in student assessments, questions arise regarding the fairness and impartiality of these evaluations. For example, machine learning-based assessment systems evaluate student performance according to databases; however, concerns exist regarding the accuracy and impartiality of these systems [6]. Moreover, the use of AI in academic research raises new issues related to ethical standards and originality. Although AI-supported writing tools accelerate academic writing processes, they also bring about new discussions on plagiarism and

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originality. In academic circles, more work and regulation are needed on the ethical use of AI and the protection of academic originality [5]. Academic self-efficacy, on the other hand, is a concept that refers to students' beliefs in their ability to successfully complete academic tasks [7].

Artificial intelligence can also be defined as the ability of a computer or a machine controlled by a computer to use human-specific skills such as reasoning, problem-solving, understanding, learning from experiences, and using logic [8,9]. This field is an interdisciplinary science that aims to find solutions to problems using human mental capabilities through computer-controlled machines [10]. AI is expected to demonstrate the ability to think, predict, generalize, and learn from experiences [11]. Artificial neural networks (ANNs) are an AI technique that models the concept of learning in computer systems. ANNs are effectively used in situations where fixed methods are not valid. This method offers a wide range of applications, from financial analyses to stock market predictions and credit evaluations. In the field of computer vision, artificial neural networks have a significant impact on data processing tasks such as object recognition, face recognition, and image classification. Additionally, ANNs are frequently used in classification and regression problems [12].

Artificial Intelligence (AI) has become a major transformative force in many sectors, including academia. The integration of AI products, such as applications and tools, into academic processes has the potential to improve research, teaching, and educational experiences. This study aims to examine how academics in Turkey use AI products and the motivations behind their usage habits. By better understanding the current situation, future goals can be determined based on this foundation. In recent years, AI technologies have rapidly advanced, bringing many powerful features to life, such as voice assistants, translation services, navigation, social security, healthcare, e-commerce, assistive robots, cybersecurity, natural language processing, and machine learning algorithms. These technologies offer opportunities for efficiency, accuracy, and innovation in academic research and teaching processes [13]. However, it has not yet been clearly established how much academics in Turkey have embraced these tools and applications. It can be said that this study aims to address a significant gap in this area. As is the case globally, one of the most important centers for AI development in Turkey is the academic world. The primary component of the academic community is faculty members. The significance of this research stems from its potential to reveal the level of AI adoption in the academic environment in Turkey. The study aims to contribute to the development of strategies that will encourage AI integration in academia by examining academics' usage habits, awareness levels, and the challenges they face. Ethical and practical concerns regarding AI usage in academic environments are also addressed. The following sections of the study present research questions and methodological approaches, survey results and findings, discussions on AI adoption processes, and suggestions for future research. The goal of this research is to encourage the broader use of AI technologies in academic research and education in Turkey and to better understand their effects. The research was conducted using a survey method. While preparing the survey questions, a comprehensive literature review was conducted, based on previous and, as much as possible, up-to-date studies in this field. Since the widespread adoption of AI products and applications has occurred over the last few decades, care was taken to ensure that the sources reviewed were from this period. The study was shaped by the data obtained from similar studies in the literature, and questions were created in accordance with the principles of "Soundness and Completeness" [14].

Artificial intelligence (AI) is widely used in various beneficial contexts, such as disease diagnosis, environmental resource conservation, educational enhancement, and workplace safety improvement. It is anticipated that AI will increase efficiency, create new opportunities, reduce human errors, take responsibility for solving complex problems, perform repetitive tasks, and ultimately enhance the quality of human life. AI technologies are expected to bring significant advancements across sectors like labor markets, education, healthcare, and security. Given these positive attributes and potential benefits, it is generally assumed that people would have favorable attitudes toward AI [17]. However, despite these optimistic expectations, concerns about AI technologies also exist. There is a growing debate regarding the potential ethical, sociopolitical, and economic risks associated with AI. For instance, Huang and Rust argued that AI poses a threat to services traditionally offered by humans [18]. Similarly, Frey and Osborne estimated that 47% of workers in the United States are at risk of losing their jobs to AI and robotics in the coming years [19]. Beyond economic risks, AI also raises concerns about security and privacy. Fears are mounting over high-profile, potentially unethical uses of AI that violate human rights, exhibit bias, engage in discrimination, manipulate individuals, or operate outside legal frameworks. Moreover, there is increasing awareness that AI could lead to significant social concerns and ethical dilemmas. Frequently mentioned ethical issues include racial biases in AI-supported decision-making systems, potential data privacy breaches by major technology companies, and discriminatory algorithmic biases that disregard human rights. Other widely debated issues include security vulnerabilities in AI systems, legal and regulatory challenges arising from the deployment of these technologies, a general lack of public trust in AI, and unrealistic expectations about its capabilities. These negative aspects of AI can lead to unfavorable attitudes toward this technology [17]. From these discussions, the concept of "attitudes toward AI" has emerged and gained prominence in recent years. There is growing interest in understanding the beliefs and attitudes toward AI and the factors influencing these perceptions [17]. Recent empirical studies have emphasized the importance of examining AI-related anxiety. For instance, Schepman and Rodway developed and validated a scale measuring general attitudes toward AI, finding that individuals with lower technological familiarity tend to report higher anxiety toward AI applications [20]. Similarly, Zhang and Dafoe conducted a comprehensive survey in the United States, revealing that public trust in AI systems is closely linked to perceived transparency and fairness, which directly affect anxiety levels [21]. In the German context, Gnambs et al. introduced the ATTARI-WHE scale to assess attitudes toward AI in work, healthcare, and education, highlighting that job insecurity and

AI use anxiety are significant predictors of negative attitudes toward AI [22]. Despite these studies, research focusing specifically on AI anxiety in localized educational contexts—especially in developing countries—remains limited. This study aims to address that gap.

As noted, AI technology brings challenges such as job displacement, privacy and transparency concerns, algorithmic biases, increasing socioeconomic inequalities, and unethical practices. These challenges can manifest as anxiety, reflecting the discomfort people may experience when confronting the changes introduced by AI technologies in their personal or social lives.

Wang and Wang categorized AI anxiety into four primary dimensions:
Job Change Anxiety – The fear of negative impacts on employment due to AI advancements.
Sociotechnical Blindness Anxiety – The concern that AI's reliance on human inputs and interactions is not fully understood.
AI Structuring Anxiety – The fear related to the increasing resemblance of AI to human intelligence.
AI Learning Anxiety – The apprehension associated with learning and adapting to AI technologies [16].

This study fills a significant gap in the existing literature on artificial intelligence (AI) anxiety. While previous research has primarily focused on the social, ethical, and economic impacts of AI, comprehensive studies directly addressing AI anxiety remain limited. This research makes a unique contribution by measuring the AI anxiety levels of academic staff and students at Batman University through metaphors, providing valuable insights into this relatively unexplored area. Additionally, the study incorporates the four main dimensions of AI anxiety proposed by Wang and Wang — job change anxiety, sociotechnical blindness anxiety, AI structuring anxiety, and AI learning anxiety — within a local context, offering data on regional differences and variations in AI anxiety across different professional groups. In this way, the study contributes to a deeper understanding of AI anxiety at both local and global levels.

## II. BACKGROUND

The primary aim of this research is to thoroughly examine the levels of anxiety related to artificial intelligence among students studying at Batman University and the academic staff working at the same university, as well as the underlying reasons for these anxieties. Additionally, the study seeks to understand the impact of these concerns on students' educational processes and the academic staff's teaching and research activities. In a period where AI technologies are rapidly advancing, the research aims to explore how these technologies are perceived within the university environment and to reveal the potential effects of these perceptions on education and academic activities. Focusing on Batman University, this study intends to identify local perceptions and concerns about AI and provide solution-oriented recommendations to mitigate these anxieties.
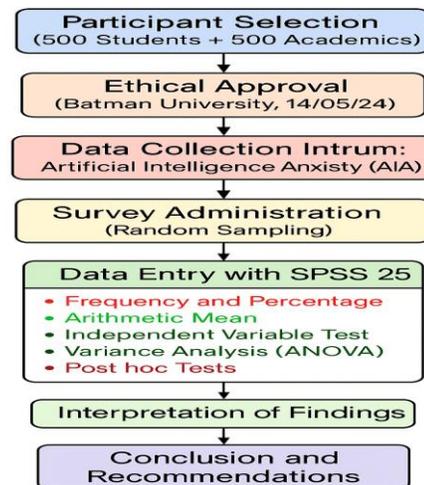
## III. MATERIALS AND METHODS



Figure 1. Research Methodology Flowchart

The following diagram visually represents the research methodology applied in this study. It outlines the sequential steps taken—from participant selection and ethical approval to data collection, statistical processing using SPSS, and final conclusions. This flowchart is provided to help readers understand the research process in a structured and comprehensive manner.

### A. Research Model

This study was conducted with the approval of the Batman University Ethics Committee (Decision No: 148536/24-03, Date: 14/05/24). The research adopts a descriptive survey design to assess AI-related anxiety levels among students and academic staff. The overall structure of the research is outlined below:
Explanation of Common Statistical Symbols Used in Tables
n (Sample Size)
- Represents the number of participants or observations included in the analysis. It indicates the total count of cases for a particular group or condition.

Calculation:
- Simply counts the number of valid responses or observations in the dataset.

$\bar{X}$ (Arithmetic Mean)
- The average value of a set of numbers, calculated by dividing the sum of all values by the total number of values. It represents the central tendency of the data.

Formula:

$$\bar{X} = \frac{\sum X}{n} \qquad (1)$$

ss (Standard Deviation)
- A measure of the dispersion or variability of a set of values around the mean. It indicates how much the values in the data set deviate from the average.

Formula:

$$s = \frac{\sum \sqrt{(x - \bar{x})^2}}{n - 1} \quad (2)$$

t (t-Statistic)

- A value used in t-tests to determine whether the means of two groups are significantly different from each other. It is calculated as the difference between the group means divided by the standard error of the difference.

Formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{SE} \quad (3)$$

F (F-Statistic)

- Used in ANOVA (Analysis of Variance) to determine whether there are significant differences between the means of three or more groups. It compares the variance between groups to the variance within groups.

Formula:

$$F = \frac{Variance\ Between\ Groups}{Variance\ Withim\ Groups} \quad (4)$$

p (p-Value)

- A probability value that indicates the likelihood of obtaining the observed results if the null hypothesis is true. A small p-value (typically $\leq 0.05$) suggests that the observed data are unlikely under the null hypothesis, leading to its rejection.

Interpretation:

- If $p \leq 0.05$: Statistically significant (reject the null hypothesis)
- If $p > 0.05$: Not statistically significant (fail to reject the null hypothesis)

    These symbols are fundamental to statistical analysis, providing insights into the relationships and differences within the data.

Research Process Flow

1. Ethical Approval
   - Authorization from the Batman University Ethics Committee (Decision No: 148536/24-03, Date: 14/05/24)
2. Population and Sample
   - 500 students and 500 academic staff members
   - Selected using random sampling during the 2023-2024 academic year
3. Data Collection
   - Instrument: Artificial Intelligence Anxiety (AIA) Scale
   - Developed by Wang and Wang (2019)
   - Adapted into Turkish by Akkaya, Özkan B., Özkan A., and Özkan H. (2021)
4. Data Analysis
   - Frequency Analysis= A basic statistical method used to show the distribution of data and the number of occurrences within specific categories. It helps identify how often each value appears in the dataset.
   - Percentage Analysis= Expresses the distribution of data as percentages within each category. It provides a clearer understanding of the proportion of each category in the overall dataset.
   - Arithmetic Mean= A central measure of a dataset, calculated by dividing the sum of all values by the total number of values. It represents the overall tendency of the data.
   - Independent Variable Test= Statistical tests used to assess differences between two or more independent groups. For example, the t-test compares the means of two independent groups, while ANOVA (Analysis of Variance) tests for differences among three or more groups.
   - Variance Analysis (ANOVA)= A statistical method used to determine whether there are significant differences between the means of two or more groups. It compares within-group and between-group variances to identify meaningful differences.
   - Post Hoc Test= Additional tests performed after an ANOVA to identify which specific groups differ significantly from each other. Common post hoc tests include Tukey, Bonferroni, and Scheffé tests.
5. Outcome
   - Identification of AI anxiety levels
   - Examination of demographic influences (gender, age, academic field, years of service, department)
   - In-depth analysis of underlying causes of AI-related anxieties

*B. Technical Details of the AIA Scale*

The Artificial Intelligence Anxiety (AIA) Scale is a standardized measurement tool used to assess different aspects of AI-related anxiety. It includes four main dimensions:

- Job Change Anxiety – Concerns about the potential impact of AI on job security and career stability
- Sociotechnical Blindness Anxiety – Fear of the unpredictable nature and complexity of AI systems
- AI Structuring Anxiety – Anxiety related to the increasing similarity of AI to human intelligence
- AI Learning Anxiety – Worries about the ability to understand and effectively use AI technologies

This research model aims to provide a comprehensive understanding of AI anxiety within Batman University, offering insights into the factors that shape these concerns and potential strategies for addressing them.

## IV.   RESULTS AND DISCUSSIONS

TABLE I
*DEMOGRAPHIC INFORMATION OF ACADEMIC STAFF*

| Variable | Category | n | % |
|---|---|---|---|
| **Gender** | Female | 238 | 47,6 |
| | Male | 262 | 52,4 |
| **Age** | 26- 35 years | 157 | 31,4 |
| | 36-45 years | 176 | 35,2 |
| | 46 years and above | 167 | 33,4 |
| **Academic Field** | Natural Sciences | 163 | 32,6 |
| | Health Sciences | 167 | 33,4 |
| | Social Sciences | 170 | 34,0 |
| **Years of Service** | 0-10 years | 162 | 32,4 |
| | 11-20 years | 174 | 34,8 |
| | 21 years and above | 164 | 32,8 |

According to Table I, the demographic characteristics of the participants can be summarized as follows: In terms of gender, 238 (47,6%) of the academic staff participating in the study are female, while 262 (52,4%) are male. When examining the age variable, 157 (31,4%) are in the 26-35 age range, 176 (35,2%) are in the 36-45 age range, and 167 (33,4%) are 46 years or older. Regarding their academic fields, 163 (32,6%) are in the natural sciences, 167 (33,4%) are in the health sciences, and 170 (34,0%) are in the social sciences. In terms of years of service, 162 (32,4%) have 0-10 years of service, 174 (34,8%) have 11-20 years of service, and 164 (32,8%) have 21 or more years of service.

TABLE II
*DEMOGRAPHIC INFORMATION OF STUDENTS*

| Variable | Grup | n | % |
|---|---|---|---|
| **Gender** | Female | 244 | 48,8 |
| | Male | 256 | 51,2 |
| **Age** | 17-25 years | 169 | 33,8 |
| | 26-30 years | 164 | 32,8 |
| | 31 years and above | 167 | 33,4 |
| **Academic Field** | Natural Sciences | 166 | 33,2 |
| | Health Sciences | 165 | 33,0 |
| | Social Sciences | 169 | 33,8 |
| **Program of Study** | Associate Degree | 166 | 33,2 |
| | Bachelors Degree | 164 | 32,8 |
| | Master's Degree | 170 | 34,0 |

According to Table II, the demographic characteristics of the participants can be summarized as follows: In terms of gender, 244 (48,8%) of the students participating in the study are female, while 256 (51,2%) are male. When examining the age variable, 169 (33,8%) are in the 17-25 age range, 164 (32,8%) are in the 26-30 age range, and 167 (33,4%) are 31 years or older. Regarding their fields of study, 166 (33,2%) are in the natural sciences, 165 (33,0%) are in the health sciences, and 169 (33,8%) are in the social sciences. In terms of their programs of study, 166 (33,2%) are enrolled in associate degree programs, 164 (32,8%) are in undergraduate programs, and 170 (34,0%) are in graduate programs.

TABLE III
*T-TEST RESULTS OF ACADEMIC STAFF'S ARTIFICIAL INTELLIGENCE ANXIETY SCALE SUBDIMENSIONS BY GENDER*

| Sub-Dimensions | Gender | n | X | ss | t | p |
|---|---|---|---|---|---|---|
| **Learning** | Female | 238 | 7,76 | 2,78 | -1,71 | ,08 |
| | Male | 262 | 8,24 | 3,39 | | |
| **Job Change** | Female | 238 | 10,38 | 4,24 | -1,99 | **,04*** |
| | Male | 262 | 11,10 | 3,75 | | |
| **Sociotechnical Blindness** | Female | 238 | 12,78 | 3,64 | -4,62 | **,00*** |
| | Male | 262 | 14,20 | 3,23 | | |
| **AI Configuration** | Female | 238 | 7,35 | 3,76 | -4,08 | **,00*** |
| | Male | 262 | 8,71 | 3,69 | | |
| **Total Scale** | Female | 238 | 38,28 | 12,03 | -3,82 | **,00*** |
| | Male | 262 | 42,26 | 11,23 | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level*

**\*="Statistically significant"**

When examining Table III, the results of the analysis conducted to determine whether the scores of the academic staff on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on gender are as follows:

There is no statistically significant difference in the Learning subdimension, as indicated by the test statistic value of -1,71 and a probability value greater than 0,05. However, statistically significant differences were identified in the Job Change subdimension, with a test statistic value of -1,99 and a probability value less than 0,05; the Sociotechnical Blindness subdimension, with a test statistic value of -4,62 and a probability value less than 0,05; the Artificial Intelligence

Structuring subdimension, with a test statistic value of -4,08 and a probability value less than 0,05; and the Total Scale subdimension, with a test statistic value of -3,82 and a probability value less than 0,05. In these subdimensions, it was observed that the average scores of male academics were higher than those of female academics, indicating that male academics tend to exhibit higher levels of artificial intelligence anxiety compared to their female counterparts.

TABLE IV
*ANOVA RESULTS OF ACADEMIC STAFF'S ARTIFICIAL INTELLIGENCE ANXIETY SCALE SUBDIMENSIONS BY AGE*

| Sub-Dimensions | Age | n | x | Ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | 26-35 years (1) | 157 | 7,99 | 2,51 | 0,01 | ,99 | |
| | 36-45 years (2) | 176 | 8,01 | 2,73 | | | |
| | 46 years and above (3) | 167 | 8,04 | 3,94 | | | |
| **Job Change** | 26-35 years (1) | 157 | 11,66 | 4,11 | 7,08 | **,00\*** | **1>2** |
| | 36-45 years (2) | 176 | 10,03 | 3,74 | | | |
| | 46 years and above (3) | 167 | 10,66 | 4,02 | | | |
| **Sociotechnical Blindness** | 26-35 years (1) | 157 | 13,03 | 4,00 | 2,52 | ,08 | |
| | 36-45 years (2) | 176 | 13,63 | 3,65 | | | |
| | 46 years and above (3) | 167 | 13,89 | 2,72 | | | |
| **AI Configuration** | 26-35 years (1) | 157 | 7,80 | 4,25 | 10,97 | **,00\*** | **2>1>3** |
| | 36-45 years (2) | 176 | 9,07 | 3,52 | | | |
| | 46 years and above (3) | 167 | 7,25 | 3,34 | | | |
| **Total Scale** | 26-35 years (1) | 157 | 40,49 | 12,78 | 0,26 | ,76 | |
| | 36-45 years (2) | 176 | 40,75 | 11,10 | | | |
| | 46 years and above (3) | 167 | 39,85 | 11,54 | | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant"**

When examining Table IV, the results of the analysis conducted to determine whether the scores of the academic staff on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on age are as follows:

There are no statistically significant differences in the Learning subdimension, as indicated by an F-value of 0,01 and a probability value greater than 0,05; the Sociotechnical Blindness subdimension, with an F-value of 2,52 and a probability value greater than 0,05; and the Total Scale subdimension, with an F-value of 0,26 and a probability value greater than 0,05. However, statistically significant differences were found in the Job Change subdimension, with an F-value of 7,08 and a probability value less than 0,05, and the Artificial Intelligence Structuring subdimension, with an F-value of 10,97 and a probability value less than 0,05. According to the post hoc analysis, individuals in the 26 to 35 age group exhibited high levels of anxiety regarding artificial intelligence in the Job Change subdimension, while those in the 36 to 45 age group demonstrated higher anxiety levels in the Artificial Intelligence Structuring subdimension.

TABLE V
*ANOVA RESULTS OF ACADEMIC STAFF'S ARTIFICIAL INTELLIGENCE ANXIETY SCALE SUBDIMENSIONS BY*

| Sub-Dimensions | Academic Field | n | x | Ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | Natural Sciences (1) | 163 | 8,34 | 2,66 | 18,61 | **,00\*** | **2>1,3** |
| | Health Sciences (2) | 167 | 8,83 | 4,09 | | | |
| | Social Sciences (3) | 170 | 6,90 | 1,89 | | | |
| **Job Change** | Natural Sciences (1) | 163 | 11,36 | 4,02 | 64,92 | **,00\*** | **2>1,3** |
| | Health Sciences (2) | 167 | 12,64 | 3,65 | | | |
| | Social Sciences (3) | 170 | 8,32 | 2,99 | | | |
| **Sociotechnical Blindness** | Natural Sciences (1) | 163 | 13,69 | 3,55 | 74,82 | **,00\*** | **2>1,3** |
| | Health Sciences (2) | 167 | 15,52 | 2,73 | | | |
| | Social Sciences (3) | 170 | 11,42 | 2,90 | | | |
| **AI Configuration** | Natural Sciences (1) | 163 | 7,98 | 3,88 | 13,65 | **,00\*** | **2>1,3** |
| | Health Sciences (2) | 167 | 9,16 | 3,34 | | | |
| | Social Sciences (3) | 170 | 7,07 | 3,83 | | | |
| **Total Scale** | Natural Sciences (1) | 163 | 41,38 | 12,09 | 58,97 | **,00\*** | **2>1,3** |
| | Health Sciences (2) | 167 | 46,16 | 11,01 | | | |
| | Social Sciences (3) | 170 | 33,71 | 8,48 | | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant"**

When examining Table V, the results of the analysis conducted to determine whether the scores of the academic staff on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on field are as follows: Statistically significant differences were found in the Learning subdimension, with an F-value of 18,61 and a probability value less than 0,05; the Job Change subdimension, with an F-value of 64,92 and a probability value less than 0,05; the Sociotechnical Blindness subdimension, with an F-value of 74,82 and a probability value less than 0,05; the Artificial Intelligence Structuring subdimension, with an F-value of 13,65 and a probability value less than 0,05; and the Total Scale

subdimension, with an F-value of 58,97 and a probability value less than 0,05. According to the post hoc analysis, it was found that academic staff in the Health Sciences field exhibited higher levels of artificial intelligence anxiety across all subdimensions.

TABLE VI
*ANOVA RESULTS OF SUBDİMENSİONS OF THE ARTİFİCİAL INTELLİGENCE ANXİETY SCALE BASED ON YEARS OF SERVİCE FOR ACADEMİC STAFF*

| Sub-Dimensions | Years of Service | n | x | Ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | 0-10 years (1) | 162 | 8,60 | 2,37 | 10,39 | **,00*** | **1>2** |
| | 11-20 yerars (2) | 174 | 7,17 | 2,77 | | | |
| | 21 years and above (3) | 164 | 8,32 | 3,88 | | | |
| **Job Change** | 0-10 years (1) | 162 | 12,16 | 3,68 | 16,40 | **,00*** | **1>2,3** |
| | 11-20 yerars (2) | 174 | 10,31 | 3,99 | | | |
| | 21 years and above (3) | 164 | 9,83 | 3,97 | | | |
| **Sociotechnical Blindness** | 0-10 years (1) | 162 | 13,98 | 3,51 | 1,97 | ,14 | |
| | 11-20 yerars (2) | 174 | 13,32 | 4,04 | | | |
| | 21 years and above (3) | 164 | 13,30 | 2,79 | | | |
| **AI Configuration** | 0-10 years (1) | 162 | 9,28 | 3,92 | 13,53 | **,00*** | **1>2,3** |
| | 11-20 yerars (2) | 174 | 7,68 | 3,66 | | | |
| | 21 years and above (3) | 164 | 7,26 | 3,47 | | | |
| **Total Scale** | 0-10 years (1) | 162 | 44,03 | 10,04 | 12,12 | **,00*** | **1>2,3** |
| | 11-20 yerars (2) | 174 | 38,50 | 12,13 | | | |
| | 21 years and above (3) | 164 | 38,73 | 12,22 | | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant"**

When examining Table 6, the results of the analysis conducted to determine whether the scores of the academic staff on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on years of service are as follows: No statistically significant difference is found in the Sociotechnical Blindness subdimension, as indicated by an F-value of 1,97 and a probability value greater than 0,05. However, statistically significant differences are identified in the Learning subdimension, with an F-value of 10,39 and a probability value less than 0,05; the Job Displacement subdimension, with an F-value of 16,40 and a probability value less than 0,05; the Artificial Intelligence Structuring subdimension, with an F-value of 13,53 and a probability value less than 0,05; and the Total Scale subdimension, with an F-value of 12,12 and a probability value less than 0,05. According to the post hoc analysis, it is observed that academic staff with 0 to 10 years of service experience exhibit higher levels of artificial intelligence anxiety across all subdimensions where significant differences are found.

TABLE VII
*RESULTS OF THE T-TEST FOR THE AI ANXIETY SCALE SUBSCALES OF BATMAN UNIVERSITY STUDENTS BASED ON THE GENDER VARIABLE*

| Sub-Dimensions | Gender | n | X | ss | t | p |
|---|---|---|---|---|---|---|
| **Learning** | Female | 244 | 11,77 | 5,41 | 3,51 | **,00*** |
| | Male | 256 | 10,16 | 4,84 | | |
| **Job Change** | Female | 244 | 14,12 | 3,57 | 2,96 | **,00*** |
| | Male | 256 | 13,08 | 4,23 | | |
| **Sociotechnical Blindness** | Female | 244 | 14,88 | 3,70 | 2,36 | **,01*** |
| | Male | 256 | 14,05 | 4,14 | | |
| **AI Configuration** | Female | 244 | 9,14 | 3,69 | 2,28 | **,02*** |
| | Male | 256 | 8,40 | 3,57 | | |
| **Total Scale** | Female | 244 | 49,93 | 13,54 | 3,57 | **,00*** |
| | Male | 256 | 45,71 | 12,93 | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant"**

When examining Table VII, the results of the analysis conducted to determine whether the scores of Batman University students on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on gender are as follows: Statistically significant differences were found in the Learning subdimension, with a t-value of 3,51 and a probability value less than 0,05; the Job Replacement subdimension, with a t-value of 2,96 and a probability value less than 0,05; the Sociotechnical Blindness subdimension, with a t-value of 2,36 and a probability value less than 0,05; the Artificial Intelligence Structuring subdimension, with a t-value of 2,28 and a probability value less than 0,05; and the Total Scale subdimension, with a t-value of 3,57 and a probability value less than 0,05. When examining all the subdimensions where statistically significant differences were found, it was determined that the average scores of female students were higher than those of male students, indicating that female students tend to experience higher levels of artificial intelligence anxiety compared to their male counterparts.

TABLE VIII
*ANOVA RESULTS FOR SUBSCALES OF THE AI ANXIETY SCALE BY AGE VARIABLE FOR BATMAN UNIVERSITY STUDENTS*

| Sub-Dimensions | Age | n | x | ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | 17-25 years (1) | 169 | 11,27 | 6,20 | 0,51 | ,60 | |
| | 26-30 years (2) | 164 | 10,85 | 4,35 | | | |
| | 31 years and above (3) | 167 | 10,72 | 4,81 | | | |
| **Job Change** | 17-25 years (1) | 169 | 14,18 | 3,64 | 3,59 | **,02*** | **1>2** |
| | 26-30 years (2) | 164 | 13,03 | 3,93 | | | |
| | 31 years and above (3) | 167 | 13,53 | 4,20 | | | |
| **Sociotechnical Blindness** | 17-25 years (1) | 169 | 14,08 | 4,10 | 2,24 | ,10 | |
| | 26-30 years (2) | 164 | 14,34 | 3,87 | | | |
| | 31 years and above (3) | 167 | 14,97 | 3,84 | | | |
| **AI Configuration** | 17-25 years (1) | 169 | 8,56 | 3,56 | 0,48 | ,61 | |
| | 26-30 years (2) | 164 | 8,78 | 3,60 | | | |
| | 31 years and above (3) | 167 | 8,95 | 3,78 | | | |
| **Total Scale** | 17-25 years (1) | 169 | 48,10 | 14,11 | 0,39 | ,67 | |
| | 26-30 years (2) | 164 | 47,01 | 12,76 | | | |
| | 31 years and above (3) | 167 | 48,77 | 13,28 | | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant"**

When examining Table 8, the results of the analysis conducted to determine whether the scores of Batman University students on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on age are as follows: No statistically significant differences were found in the Learning subdimension, with an F-value of 0,51 and a probability value greater than 0,05; the Sociotechnical Blindness subdimension, with an F-value of 2,24 and a probability value greater than 0,05; the Artificial Intelligence Structuring subdimension, with an F-value of 0,48 and a probability value greater than 0,05; and the Total Scale subdimension, with an F-value of 0,39 and a probability value greater than 0,05. However, a statistically significant difference was identified in the Job Replacement subdimension, with an F-value of 3,59 and a probability value less than 0,05. According to the post hoc analysis, it was observed that students in the 17 to 25 age range exhibit higher levels of artificial intelligence anxiety in the Job Replacement subdimension.

TABLE IX
*ANOVA RESULTS OF AI ANXIETY SCALE SUBDIMENSIONS BASED ON FIELD OF STUDY FOR BATMAN UNIVERSITY STUDENTS*

| Sub-Dimensions | Academic Field | n | x | Ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | Natural Sciences (1) | 166 | 10,48 | 4,53 | 1,49 | ,22 | |
| | Health Sciences (2) | 165 | 10,89 | 4,98 | | | |
| | Social Sciences (3) | 169 | 11,46 | 5,91 | | | |
| **Job Change** | Natural Sciences (1) | 166 | 12,93 | 4,39 | 3,54 | **,03*** | |
| | Health Sciences (2) | 165 | 13,85 | 3,56 | | | **3>1** |
| | Social Sciences (3) | 169 | 13,98 | 3,80 | | | |
| **Sociotechnical Blindness** | Natural Sciences (1) | 166 | 14,59 | 3,25 | 1,29 | ,27 | |
| | Health Sciences (2) | 165 | 14,06 | 4,23 | | | |
| | Social Sciences (3) | 169 | 14,72 | 4,27 | | | |
| **AI Configuration** | Natural Sciences (1) | 166 | 8,74 | 3,67 | 2,34 | ,09 | |
| | Health Sciences (2) | 165 | 7,33 | 3,59 | | | |
| | Social Sciences (3) | 169 | 9,20 | 3,65 | | | |
| **Total Scale** | Natural Sciences (1) | 166 | 46,75 | 12,89 | 1,87 | ,15 | |
| | Health Sciences (2) | 165 | 47,15 | 13,24 | | | |
| | Social Sciences (3) | 169 | 49,37 | 13,92 | | | |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant**

When examining Table 9, the results of the analysis conducted to determine whether the scores of Batman University students on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on field of study are as follows: No statistically significant differences were found in the Learning subdimension, with an F-value of 1,49 and a probability value greater than 0,05; the Sociotechnical Blindness subdimension, with an F-value of 1,29 and a probability value greater than 0,05; the Artificial Intelligence Structuring subdimension, with an F-value of 2,34 and a probability value greater than 0,05; and the Total Scale subdimension, with an F-value of 1,87 and a probability value greater than 0,05. However, a statistically significant difference was found in the Work Replacement subdimension, with an F-value of 3,54 and a probability value less than 0,05. According to the post hoc analysis, it was observed that students studying in the social sciences exhibit higher levels of artificial intelligence anxiety in the Work Replacement subdimension.

TABLE X
*ANOVA RESULTS OF AI ANXIETY SCALE SUBDIMENSIONS BASED ON MAJOR FOR BATMAN UNIVERSITY STUDENTS*

| Sub-Dimensions | Program of Study | n | x | ss | F | p | Difference |
|---|---|---|---|---|---|---|---|
| **Learning** | Associate Degree (1) | 166 | 10,57 | 5,55 | | | |
| | Bachelors Degree (2) | 164 | 11,82 | 5,74 | | | |
| | Master's Degree (3) | 170 | 10,48 | 4,05 | 3,48 | ,03* | **2>3** |
| **Job Change** | Associate Degree (1) | 166 | 13,27 | 3,87 | | | |
| | Bachelors Degree (2) | 164 | 14,59 | 3,86 | | | |
| | Master's Degree (3) | 170 | 12,94 | 3,94 | 8,30 | ,00* | **2>1,3** |
| **Sociotechnical Blindness** | Associate Degree (1) | 166 | 14,25 | 4,16 | | | |
| | Bachelors Degree (2) | 164 | 15,45 | 3,52 | | | |
| | Master's Degree (3) | 170 | 13,71 | 3,95 | 8,75 | ,00* | **2>1,3** |
| **AI Configuration** | Associate Degree (1) | 166 | 8,50 | 3,75 | | | |
| | Bachelors Degree (2) | 164 | 9,37 | 3,54 | | | |
| | Master's Degree (3) | 170 | 8,42 | 3,59 | 3,51 | ,03* | **2>3** |
| **Total Scale** | Associate Degree (1) | 166 | 46,60 | 14,33 | | | |
| | Bachelors Degree (2) | 164 | 51,25 | 13,05 | | | |
| | Master's Degree (3) | 170 | 45,55 | 12,08 | 8,74 | ,00* | **2>1,3** |

*Note: n = sample size; $\bar{X}$ = mean; ss = standard deviation; t = t-test value; p = significance level.*
**\*="Statistically significant**

When examining the analysis results conducted to determine whether the scores of Batman University students on the various subdimensions of the Artificial Intelligence Anxiety Scale differ based on major, the following statistically significant differences were identified: In the Learning subdimension, an F-value of 3,48 and a probability value less than 0,05; in the Job Change subdimension, an F-value of 8,30 and a probability value less than 0,05; in the Sociotechnical Blindness subdimension, an F-value of 8,75 and a probability

## V. CONCLUSION

In this study, the Artificial Intelligence Anxiety Scale (AIAS) developed by Wang and Wang [16] was used to measure the levels of artificial intelligence (AI) anxiety. The findings indicate that AI-related anxieties are generally concentrated on technological unemployment, ethical issues, and privacy violations. Similarly, a study conducted by Akkaya et al. [15] found that a significant portion of academic staff in Turkey is concerned about the negative impacts of AI on professional roles. These results align with our findings, highlighting the increasing anxiety surrounding AI technologies. Our study also revealed that AI anxiety varies significantly based on demographic factors. In particular, variables such as age, gender, years of service, and educational level were found to have a meaningful impact on AI anxiety levels. Younger and less experienced academic staff were observed to exhibit higher levels of anxiety towards AI technologies. Consistent with this, Akkaya et al. [15] also reported that students in technology-related fields tend to experience higher levels of AI anxiety. These findings emphasize the importance of developing awareness programs within universities to address these concerns. In terms of gender differences, the analysis indicated that male academic staff generally experience higher levels of AI anxiety than their female counterparts. This was particularly evident in the subdimensions of Job Change, Sociotechnical Blindness, AI Structuring, and Total Scale. In contrast, among student groups, female students were found to have higher levels of AI anxiety compared to male students. These results suggest that AI anxiety is closely linked to gender differences.

value less than 0,05; in the Artificial Intelligence Structuring subdimension, an F-value of 3,51 and a probability value less than 0,05; and in the Total Scale subdimension, an F-value of 8,74 and a probability value less than 0,05. According to the post hoc analysis, it was observed that students enrolled in undergraduate programs exhibit higher levels of artificial intelligence anxiety across all subdimensions where statistically significant differences were identified

Regarding age, the analysis showed that younger academic staff (aged 26-35) exhibit higher levels of anxiety in the Job Change subdimension, while those in the middle age group (aged 36-45) tend to show higher anxiety levels in the AI Structuring subdimension. Among students, those aged 17-25 were found to have higher anxiety in the Job Change subdimension. These findings indicate that younger individuals are more concerned about the impact of AI on their professional futures. When examining the influence of academic discipline, it was found that academic staff in the Health Sciences field exhibit higher levels of AI anxiety across all subdimensions. Among students, those studying in the social sciences were found to have higher anxiety levels in the Job Change subdimension. These results suggest that the level of interaction with AI technologies varies significantly across different fields, affecting anxiety levels accordingly. Finally, the analysis based on years of service revealed that academic staff with 0-10 years of experience exhibit higher levels of AI anxiety. This finding suggests that as professional experience increases, concerns about AI technologies tend to decrease. The findings of this study reveal statistically significant differences across several demographic groups. For example, male academic staff reported higher sociotechnical blindness anxiety (M = 14.20, p < .001) and AI structuring anxiety (M = 8.71, p < .001) scores compared to their female counterparts. Among students, the highest job change anxiety was found in the 17–25 age group (M = 14.18, p < .05). Additionally, academic staff in the Health Sciences field exhibited the highest total AI anxiety score (M = 46.16, p < .001), and those with 0–10 years of experience scored significantly higher across most anxiety dimensions (p < .001).

In summary, the findings of this study indicate that AI anxiety varies significantly according to demographic and professional factors. Notably, younger, less experienced academic staff and female students tend to exhibit higher levels of anxiety. This highlights the need for targeted educational programs aimed at raising awareness about AI and supporting individuals in adapting to these emerging technologies.

**Ethics Committee Approval Information**: This research was conducted with the permission of Batman University Ethics Committee, decision numbered 148536/24-03 dated 14/05/24.

**Conflict of Interest Information**: The author declares that there is no conflict of interest with any institution or person included within the scope of the study.

**Statement of Contribution Rate**: The authors of the study contributed equally to all aspects of the study.

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