

AI and workforce transformation in Kazakhstan: examining the impact on national/local business operations, industries, and management strategies.

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June 3, 2024

Outline

1

Research objectives

4

Analysis and results

2

Literature review

5

Conclusion

3

**Research
methodology**

6

Recommendations

Research objectives

Aim: to examine the impact of AI adoption on Kazakhstan's labor market and evaluate strategies for adapting the workforce to technological innovation

1

How successfully can AI and AI-related technologies be implemented in business operations in Kazakhstan?

2

How does AI restructure the traditional workforce and how can AI technologies be useful for the workforce?

3

What is the current state of AI's impact on Kazakhstani companies and businesses, and what is the future of workforce transformation?

Literature review

Overview

- Sources: journal articles, reports, conference papers, publications
- Keywords: AI, workforce transformation, labor market

Findings

- AI is transforming job roles, emphasizing socio-emotional, cognitive, and interdisciplinary skills.
- AI improves productivity and working conditions, but fair and inclusive policies are crucial.
- Unique human skills remain mostly resistant to AI, emphasizing the need for innovation and human capital investment.
- Ethical AI adoption requires transparency, accountability, and human-centered design.

Research gap

- The topic of AI and workforce transformation has not been studied in the CIS zone, especially in Kazakhstan

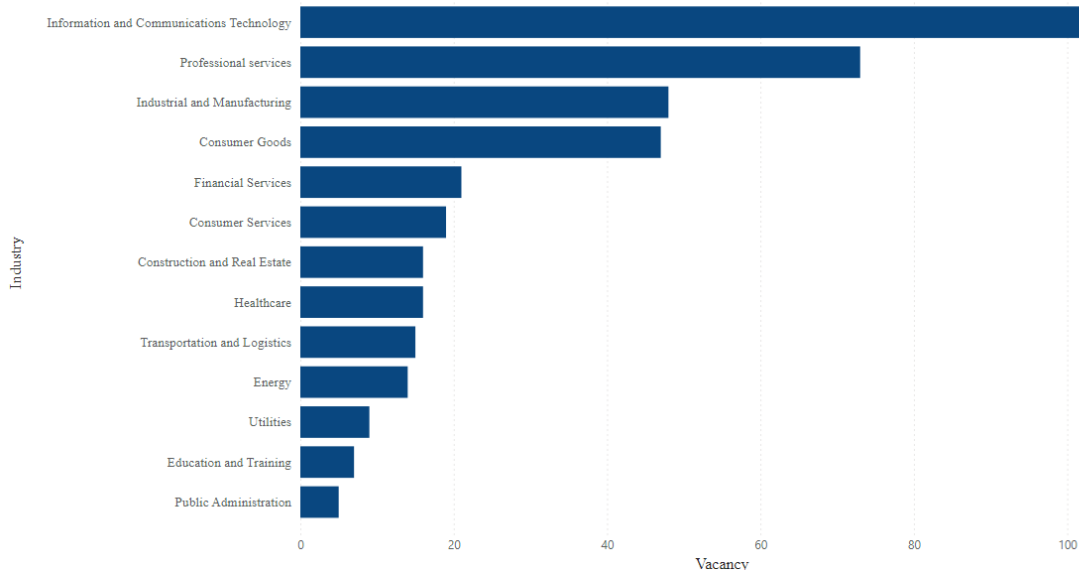
Research methodology

Job postings analysis

Online survey

Research methods	Utilized quantitative methods to analyze job postings on LinkedIn and HH.kz	Conducted an online survey to gather qualitative and quantitative data
Data collection	Collected data from online job platforms to identify trends in AI skill requirements and job types	Executed a survey via Microsoft Forms to understand participants' familiarity with AI and perspectives on AI adoption
Data analysis	Employed Power BI for data visualization and analysis	Used SPSS for statistical analysis of survey data, focusing on respondents' AI awareness and industry-specific insights

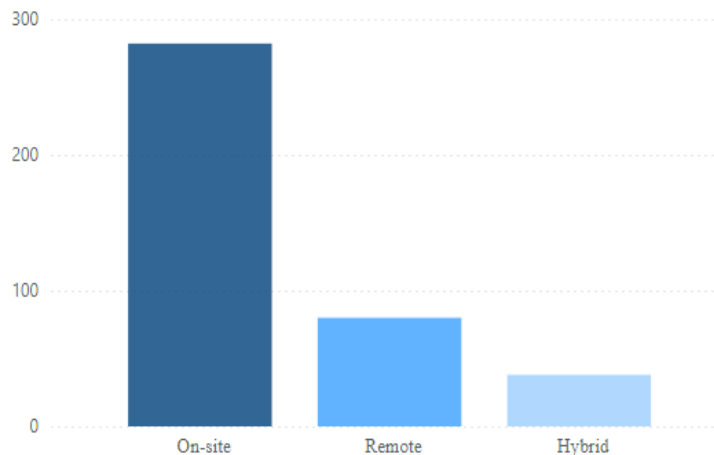
Distribution of Vacancies by Industry



Distribution of Vacancies by Industry

- The **400** vacancies that were gathered into **13** industries.
- **ICT** specialists are in high demand in the labor market

Work arrangement



Work arrangement

- **282** jobs out of 400 are on-site (70.5%)
- **80** jobs are remote (20%)
- **38** jobs are hybrid mode (9.5%)

Analysis of skills

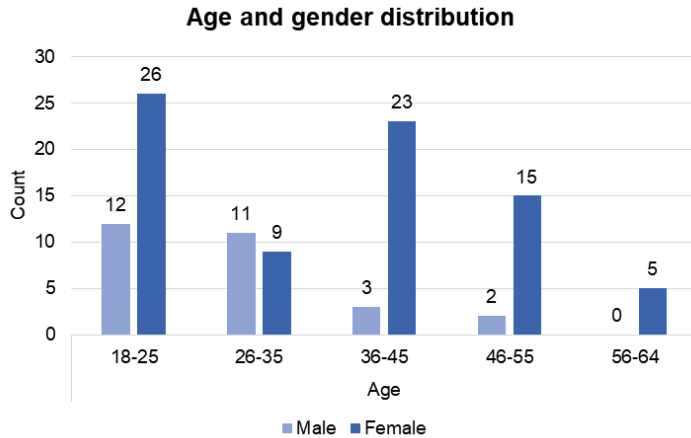
Skills that can be replaced by AI (41.2%)

- Data analysis and forecasting
- Development and optimization of ML algorithms
- Natural language processing
- Creation and management of automatic recommendation systems
- Creation of algorithms for automatic data
- Training of chatbots for customer service
- SQL

Skills that can not be replaced by AI (58.8%)

- Interpersonal communication
- Ethical decision making
- Leadership and team management
- Physical labor
- Personal customer service
- Adaptability and flexibility
- Critical thinking creativity and innovation emotional
- Intelligence complex
- Manual tasks (Surgical procedures)

Online survey results



- 106 people completed the survey
- 26% males, 74% females
- 14 industries, 5 occupations

26%

of people are **not** at all familiar with AI within the workplace

84%

of people note that their responsibilities did **not** change since introduction of AI

78%

of people are **not** worried about AI replacing their jobs

68%

of respondents note that AI has **no** effect on job satisfaction

22%

of respondents have undergone general or AI related trainings and/or upskilling

26%

of respondents **never** collaborated with AI

Conclusion

High demand for IT skills

It reflects the growing technological impact and digital transformation in Kazakhstan

General lack of familiarity with AI

Since most of the respondents are not well familiar with AI and its use, they are also not worried of potential job loss



AI is not yet fully integrated into companies and business strategies in KZ

No significant changes in job performance, responsibilities and satisfaction were highlighted among the respondents

Need for broader AI literacy

It is crucial for the country to maximize the possible benefits of AI use. Employees across all fields should be well-prepared for future collaboration with new technologies.

Recommendations

