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The Impact of AI and ML on Entrepreneurship and Career Development Opportunities for Young People

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Abstract:

Purpose: *While AI and ML technologies are recognized as essential aids in many areas of life today, including the planning and implementation of professional and business activities, these technologies still raise many questions and doubts. Digital innovations, including AI and ML, play a significant role in business management processes, which may lead to the disappearance of some professions. The study sets the following goals: 1. To obtain a picture of the young generation's perception, the degree of use, and development of AI in various areas of economic and social life. 2. To examine how young people assess the opportunities and threats arising from the growing role and functionality of these technologies in the context of their entrepreneurship and future professional activity.*
Design/Methodology/Approach: *The study utilizes a variety of methods. The first part of the study involves an analysis of peer-reviewed literature and deductive reasoning. The second part of the article presents the results of surveys conducted among students of fields related to management and business operations (including economics, finance and accounting, management, and others). The results of these studies were presented using quantitative and qualitative analysis of open-ended questions, followed by interpretation and inference.*
Findings: *According to the research, despite their fascination with modern technologies and advances in digitalization, young people see opportunities for self-development using technological advancements (AI and ML), including the ability to start their own businesses or pursue professional ambitions. At the same time, they perceive serious threats associated with the use of AI and ML in many different areas of life and the economy, including unemployment, waves of layoffs, and the disappearance of certain professions, as well as the loss of independent problem-solving skills, lack of creativity, and possible information manipulation and fraud.*
Practical Implications: *The literature review and research findings point to gaps and prospects for further research and analysis in this area, and more importantly, to educational needs and the need to develop an ethical framework for the use of artificial intelligence.*
Originality/Value: *Based on the literature review and survey research, the author attempted to address the issues raised regarding the place and role of AI in stimulating entrepreneurship among young people and their future professional activity, complementing the perspectives*

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presented in the literature to date. The conclusions can constitute important recommendations for institutions influencing the direction of youth education, as well as for businesses, institutions, and organizations in creating an ethical framework for the use and development of ML and AI.

Keywords: *Entrepreneurship, artificial intelligence, machine learning, youth entrepreneurship.*

JEL Code: *L26, J24.*

Paper type: *Research article.*

1. Introduction

The growing role of AI (artificial intelligence) and ML (machine learning) in today's world raises questions about the scope, possibilities, benefits and threats resulting from the use of these technologies in various areas of life. AI and ML are currently being used to an increasing extent in business management processes.

Therefore, not only those who impart knowledge (academic teachers) but also students of various fields, especially management, economics, accounting and finance, are asking themselves about the meaning of education in this area. Will artificial intelligence replace accountants, cost controllers, financial analysts, production managers, logisticians, etc.?

As early as 2020, the World Economic Forum's report entitled "The Future of Jobs Report 2020" (World Economic Forum, 2020) estimated that as many as 50% of all employees will need to be retrained by 2025 as technology adoption increases. In turn, the WEF report from 2025 (World Economic Forum, 2025) presented a summary of key skills today (in 2025) with forecasts for 2030. Currently, the most important competencies in light of this report are: analytical thinking, flexibility, adaptability, leadership and social influence, talent management, environmental protection and cybersecurity.

Over time, it appears that the positions in this ranking will change, and according to forecasts for 2030, the first to be indicated are: network management and cybersecurity, followed by talent management, environmental protection and specialisation in AI and Big Data. Furthermore, according to the WEF report (World Economic Report, 2025), 60% of companies expect digitalisation and artificial intelligence (AI) to change their business.[3]

It is now 2025 – the question arises as to the future of young people who are currently training in traditional professions that have been essential to the functioning of the economy until now.

The aim of this article is to compile existing studies and publications on the growing role of AI and ML in the areas of business management, finance and accounting with the results of surveys conducted among students on their perception of the prospects of practising a profession or running a business in the face of the all-encompassing, highly advanced technology using AI and ML.

Artificial intelligence and machine learning have burst into our everyday lives and the lives of businesses and institutions with remarkable speed. We recognise the undoubted advantages of this technology, which allows for the automation of certain accounting and analytical processes (Mediaty *et al.,* 2024), the automation of financial processes, and the enhancement of decision-making support tools (Kerr, 2025), innovative data analysis methods (Alruwaili and Mgammal, 2025), and even forecasting tools that participate in active financial liquidity management and fraud detection (Broby, 2022).

In turn, referring to the above-mentioned reports of the World Economic Forum in 2020 and 2025, according to entrepreneurs and employers, the requirements for the desired and expected skills of employees are changing, and among them they mention, among others, critical thinking, problem solving, self- organisation and a propensity for active learning, high tolerance for stress and competences in AI, Big Data and cybersecurity.

2. Literature Review

As early as the 1990s, research on artificial intelligence was described as computational methods that could recognise, analyse and draw conclusions (Winston, 1992). Artificial intelligence (AI) is a technology that, within various systems, can solve problems/tasks that until now could only be solved by human intelligence, such as data analysis, language interpretation, pattern recognition, etc. (Rich and Knight, 1990, Kurzweil 1999, Russell and Norvig, 2022).

Currently, AI is treated in conjunction with machine learning techniques. These technologies are often used simultaneously. Undoubtedly, the very idea (in the 1950s) and today's practical applications of AI and ML technologies are extremely innovative, and when implemented in specific systems, e.g. in the field of data analysis in a company, they are treated as highly innovative solutions supporting management. Innovation is one of the most important features of entrepreneurship, so let us repeat the question: can AI and ML be a determinant of entrepreneurial development?

There are many factors that stimulate entrepreneurship. P. Drucker is considered a classic in this field. In his works, he draws attention primarily to the strong links between entrepreneurship and the environment, and writes about it as an event that shapes the economy (Drucker, 1992). Entrepreneurship is often defined as the process of creating something new/innovative, involving financial commitment but

also requiring effort and time, and accepting risk (Hirsch and Peters 1992). Another approach, which treats entrepreneurship as a human characteristic rather than a process, was presented by J. Schumpeter, who introduced the concept of the entrepreneur-innovator, emphasising their activity and creativity in introducing change (Augustyńczyk, 2020; Wach, 2015). In turn, Gibb (1990) defines the entrepreneur as a person with initiative, high creativity and problem-solving skills, who is flexible and willing to take risks.

Following the above approaches to entrepreneurship, we must undoubtedly recognise the characteristics that remain within the realm of human activity – initiative, commitment, acceptance and/or risk-taking. However, looking at LM and AI systems – the processes of creating new solutions, analysing and solving problems, as well as analysing risks – these are already characteristics that are implemented in systems using LM and AI technologies.

Innovation has also often been and still is associated with entrepreneurship. Today, AI and ML are undoubtedly novel and innovative concepts/technologies in themselves. Can their use or implementation in commercial systems (e.g. for business management) become new factors in the development of entrepreneurship? Opinions are divided. Official sources from the European Commission (2024) indicate that AI has a significant impact on risk and, importantly from the point of view of this article, may also negatively affect the freedom of start-ups to experiment (Regulation (EU) 2024/1689).

The place and relationships of start-ups in their operating environment are also changing due to AI, especially those relationships that involve business environment institutions and investors (Fossen et al. 2024). Machine learning and artificial intelligence can be tools that support novice entrepreneurs and students designing their businesses, especially in areas such as market analysis and variant simulations to aid decision- making (Park *et al.,* 2025).

Ganuthula (2025) emphasises in his study that AI can be particularly useful in sole proprietorships (so-called "solopartnerships"). Running a business alone, without partners or employees, where the owner is also the employee and is responsible for all areas of the business, is undoubtedly difficult.

While this offers great flexibility and independence, certain problems may arise – and this is where AI can be helpful. Young entrepreneurs, especially those operating under new business models or in innovative fields, use AI tools for content creation, social media management, and financial reporting (Rajko, 2024).

In small and medium-sized enterprises, in later stages of their development, AI is used to automate certain processes (e.g. accounting, logistics) and for forecasting. However, as Le Dinh *et al.* (2025) point out, the scale and scope of application of such advanced tools depends on competence.

However, many researchers in this field highlight a number of significant barriers to the adaptation and use of AI by small and medium-sized enterprises. Among these, the most frequently mentioned are infrastructure deficiencies and lack of technical competence, as well as mistrust of AI and ethical concerns (Rajko 2024; Al-Mamary *et al.,* 2025).

Entrepreneurship is a stimulus for development, a determinant of the activities of small and medium- sized enterprises, and ultimately a characteristic of people who undertake (innovative and sometimes risky) activities within an organisation, as well as those who run their own businesses. We can even say that entrepreneurship is attributed to a person – their commitment, creativity, diligence and charisma. Piróg (2014) identifies entrepreneurial competences as an important element of human capital, which fundamentally influences the creation and success of an enterprise, as well as entry into the labour market and career development.

According to research (Lesinskis *et al.,* 2023), Generation Z, whose representatives are currently, for example, students, are much more open to innovative technologies than other age groups.

Moreover, expecting quick answers to the problems they face, they see opportunities in digital tools and feel more comfortable with them.The role of AI in work and entrepreneurship is perceived differently by them, which is due, among other things, to a different approach to employment than the traditional one and a greater focus on individualism.

Furthermore, as indicated by Xie and Wang (2025), entrepreneurial education that incorporates AI functionalities increases belief in one's own abilities, which contributes to an increase in entrepreneurial behaviour. In their research, they also point out that students who use digital tools demonstrate stronger entrepreneurship than those who are educated using traditional methods.

However, ethical issues surrounding the use of AI by students are also highlighted. Nowak-Mizgalska (2024) points out in her work that most young people studying in different countries use tools with built-in generative artificial intelligence (e.g. ChatGPT). At the same time, she emphasises the enormous problem of responsibility that teachers take on for controlling how these tools are incorporated into learning processes, as there is a global and local (national) lack of any ethical framework for the use of AI in education.

3. Research Methodology

The survey presented in this study was conducted among young people studying at universities in south- eastern and southern Poland in fields related to the basic areas of business operations, including economics, finance and accounting, management, law, logistics and others. The respondents are undergraduate and postgraduate

students aged between 19 and 24. The survey was conducted among 250 students.

The questionnaire included questions about the perception of entrepreneurship and entrepreneurial behaviour in the context of the development and implementation of artificial intelligence and machine learning technologies in business management processes. The aim of the study was to attempt to answer whether and to what extent, in the opinion of the younger generation, AI and ML support entrepreneurship and professional activity, and what threats these technologies pose in the context of their professional careers/business activity.

4. Research Results and Discussion

Undoubtedly, people with professional experience, who have been actively running a business or practising a liberal profession for some time, appreciate AI and ML and consider them fascinating technologies, but they also arouse a certain amount of reserve or doubt. Even if the older generation actively managing companies implements decision-making support tools that use AI and ML, their view of such instruments is not uncritical.

Seeing the advantages of innovative solutions that can undoubtedly support our activities in many different areas, the question arises as to whether younger generations – unconditionally and without any reservations, with complete fascination and openness – are already using the AI-equipped tools available to them (e.g. Chat GPT) already available to them, and whether they will use these tools with the same confidence and without restrictions in their professional/business activities?

Research shows that young people are able to characterise entrepreneurship quite accurately. They say that an entrepreneurial person must demonstrate creativity (16% of respondents), determination (11%), responsibility (11%), courage (10%), organisational skills (9%), intelligence (8%), willingness to take risks (7%), communication skills and openness (6%).

When defining an entrepreneurial person, young people also mentioned assertiveness, ambition, decisiveness, crisis management skills, foresight, diligence, flexibility and charisma. Knowing what characteristics an entrepreneurial person should have, the respondents were asked to try to identify which characteristics describe them (Table 1) and to describe their plans for the future in terms of professional activity.

Among the respondents, 58% considered themselves to be moderately entrepreneurial, while 45% considered themselves to be definitely creative. Entrepreneurial people are usually considered to be risk-takers, but 71% of the students surveyed declared a moderate risk appetite, and interestingly, as many as 74% of them expressed a strong preference for stability and security.

Against this backdrop, the results concerning intentions and dreams related to future professional activity are interesting.

Table 1. *Selected characteristics of young people – through their own eyes.*

Do you consider yourself to be	Rather not	Moderately	Definitely yes
Entrepreneurial	13%	58%	29%
Creative	16%	39%	45%
Seeking novelty	10%	42%	48%
Risk-takers	16%	71%	13%
Enthusiastic about learning	0%	71%	29%
Enjoy stability and security	6%	19%	74%
Organised	13%	42%	45%
Communicative	16%	32%	52%
Independent	3%	61%	35%

Source: *Own study based on research.*

Almost half of the respondents (47%) declare their willingness to take up permanent employment in a company or institution, while 38% dream of running their own business. It is also worth mentioning that 13% plan to pursue a freelance career (e.g. as a chartered accountant or other), and 3% of respondents intend to fulfil themselves by working in project teams (contracts, as independent experts hired to carry out specific projects).

Young people, aware of the current role of AI and LM, confirmed in their responses that it has a significant impact on their lives (88% of respondents). They use tools based on these technologies mainly to solve problems (by obtaining comprehensive answers to life, social, communication, health and other issues) and to write documents (applications, extended texts, literature analyses, etc.).

Respondents were asked whether artificial intelligence helps or could help in starting a business. The vast majority (89%) answered in the affirmative, pointing to the following benefits: assistance in choosing a field of activity – inspiration, step-by-step guidance on how to start a business, support in planning, analysis of legal regulations, drafting marketing content, evaluation of ideas/strategies, faster search and acquisition of information, assistance in creating a personal brand.

Another issue raised in the survey was whether artificial intelligence tools can support business operations. As many as 66% of students answered in the affirmative, but only as tools supporting management processes, while 31% indicated that these technologies will be used significantly in management processes, and only 3% responded that they can help in managing a company to a small extent, due to barriers to implementing such instruments in companies (e.g. financial, competence).

Respondents were also asked open-ended questions about what knowledge and skills, in their opinion, would contribute to professional development and/or business success in the era of AI and LM in the area of business management.

Respectively, 20% (in terms of knowledge) and 16% (in terms of skills) of young people were unable to identify competencies in these areas. However, the vast majority of the students surveyed mentioned a number of issues related to knowledge, skills and competences that they believe will be important in the context outlined above, including:

- decision-making processes
- awareness of market trends
- data analysis
- use of smart planners and schedules
- AI ethics
- how language models work, implementation of automation/AI agents and cloud technologies
- analytical, critical and strategic thinking,
- soft skills (including communication, openness, flexibility, conflict resolution and the ability to cope in difficult situations).

Following this line of reasoning, young people were also asked whether human knowledge and skills – given the presence and development of AI and LM technologies – will be relevant at all in their professional careers or in achieving business success. 66% of respondents answered in the affirmative, while the remaining 34% said they had no opinion on the matter.

Those respondents who confirmed the value of knowledge and skills in the present emphasise that the interpretation, evaluation and understanding of context in a given field will always be a human task. This also refers to another issue, namely entrepreneurship as a human trait in the era of AI and ML and its importance in the context of young people's planned professional/business activities.

Among the respondents, 56% confirmed the importance of entrepreneurship, arguing that, unlike machines, humans have emotions, are capable of dreaming, are individuals with their own vision and often unconventional ways of thinking – and this creates new opportunities and choices.

The surveyed group was also asked to identify the most important threats they perceive today in relation to the development and application of AI and ML. The most frequently mentioned threats, cited by almost 13% of respondents, were unemployment, waves of redundancies and the disappearance of certain professions. Interestingly, young people also see the possibility of losing the ability to solve problems independently, a lack of creativity – especially among younger

generations, and a lack of a broader perspective on the problems analysed (12% of respondents).

Importantly, among the respondents, there is a nearly universal opinion that AI promotes the creation and dissemination of false information, which enables large-scale manipulation, all kinds of fraud, bias, and thus a greater likelihood of making wrong decisions (almost 72% of responses confirm such threats).

This is especially true given that, according to the students surveyed, it will become increasingly difficult to distinguish between real data and data that may have been generated by AI with a specific intention. A large proportion of respondents also highlighted the problem of the decline in social relations.

The table below presents young people's views on the degree of influence of AI and ML on the functioning and changes in various areas of life, including, in particular, business management processes.

Table 2. *Assessment of the impact of AI in LM in various areas of economic and social life in the eyes of young people.*

	No impact at all	Slightly	Will be a good help	It will have a very significant impact	It will be indispensable and play a key role
Personal finances	6%	28%	51%	15%	0%
Accounting, management accounting, controlling	0%	26%	40%	32%	2%
Fixed and current asset management (including material and goods turnover, production management, etc.)	4%	24%	40%	29%	2%
Financial analysis, risk analysis	0%	11%	32%	38%	19%
Forecasting, scenario analysis, probability of events	2%	9%	37%	43%	9%
Creating new business models based on LM	0%	7%	41%	35%	17%
Creating and managing innovation	2%	17%	39%	28%	13%
Financial market analysis and decision management (including stock market analysis/trading and stock market decisions)	4%	15%	38%	34%	9%
Control over basic areas of everyday life, e.g. communication, transport, shopping and deliveries	4%	30%	34%	23%	9%

Control of public/administrative processes (e.g. in the activities of public offices and institutions)	2%	49%	38%	9%	2%
Control and takeover of educational processes	11%	31%	42%	16%	0%

Source: *Own study based on research.*

In most of their responses, students emphasised that AI and ML will be a good help, especially in the area of personal finance, managing and conducting educational processes, as well as in selected business management processes, including: accounting, management accounting and controlling, fixed and current asset management, creating and managing innovation, and creating new business models.

It is interesting to note that in areas such as financial analysis and risk analysis, as well as financial market analysis and decision management (including stock market analysis/trading and stock market decisions), the respondents indicated that AI "will be a good help" – 32% and 38% of respondents, respectively, but also similar results for the response that AI and ML technologies will have a very significant impact on activities in these areas – 38% and 33% of respondents.

Taking into account the above-presented opinions of respondents regarding the role of knowledge, skills, competences, entrepreneurial attitudes and plans for the future, it seems that young people did emphasise certain threats, such as the disappearance of some professions or unemployment, but they do not associate this with their own career choices.

On the other hand, the results presented in Table 2 indicate that the threat of complete human replacement by AI in the areas of business management and various aspects of everyday life is also not as strongly felt as it might seem. Given that a large proportion of respondents declared that their future lies in running their own business, it seems that they will indeed treat AI and technologies using ML as an excellent aid in coping with a very dynamic economic environment, rather than as the only tool that will ruthlessly guide and lead them.

5. Conclusions, Proposals, Recommendations

While we appreciate the importance of AI and ML technologies in today's world – they can serve as an "assistant" not only in the everyday lives of young people, but also, as confirmed by the results of the above- mentioned research, in planning and implementing professional and business activities – these technologies still raise many questions and doubts.

The role of AI in information gathering, analysis and forecasting is undeniable, but we must not forget the role of humans as individuals with their individualism, emotionality and broad view of the surrounding world, taking into account dreams,

feelings, desires, frustrations and problems. Human consciousness is irreplaceable, and it is responsible for making the right decisions and choices that can ultimately have a positive impact on the world around us.

It is comforting that despite their enthusiasm and fascination with modern technologies and achievements in the field of digitalisation, young people recognise the difference between artificial intelligence and human intelligence, which is significant for the world and for us.

While recognising the opportunities for their own development through the use of technological advances (including AI and ML), they also see the serious risks associated with them. The above research points to gaps in research, educational needs and the need to formulate an ethical framework for the use of artificial intelligence.

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