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New Challenges for the University Student's Employment in the "Artificial Intelligent Time"

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Abstract. This paper will provide an overview of the various challenges that university students are likely to face when seeking employment in the era of artificial intelligence. As more students progressively rely on AI tools to complete their university assignments, the practical skills they possess become increasingly rare and insufficient when entering the competitive job market or having a few chances to get a higher salary. This concern is extremely serious. Under these circumstances, analysing the key problems students may encounter during this transition, as well as the underlying causes, will offer strong support for the central theme of the paper. These problems are categorized into three main areas: psychological challenges, structural job displacement, and institutional policies. The psychological part has a few factors: envy when browsing social media, uncertainty about future career pathways as well as reality reasons. In terms of structural job displacement, the AI is faster than the change of education policy is the key reason for the employment problems. For institutional policy, the staff in the university mainly focuses on short term-skill rather than preferring long term. Finally, the paper proposes strategies to address these issues, providing useful recommendations for students to improve their situations, for example, by developing the practical skills they currently lack.

Keywords: psychology, structural job displacement, institution policy

1. Introduction

The rapid advancement of artificial intelligence (AI) is reshaping various sectors of the global economy, including the employment landscape. According to data published by Omdia, AI is expected to increase 26.1% to China GDP by 2030, an increase of $7 trillion compared the other country [1]. This significant rise in economic output is bringing profound changes to the employment sector, particularly in terms of the skills required for future jobs. As a result, this topic has become highly relevant and poses critical questions that society must confront. For instance, AI provides robust support to companies by enabling technologies that can perform tasks automatically, enhance decision-making efficiency, and solve complex problems within seconds [2]. In such a scenario, university students—including undergraduates, postgraduates, and PhD candidates—as well as recent graduates are increasingly facing employment challenges marked by uncertainty and limited opportunities to secure desirable positions. According to the latest available statistics [3], approximately 33% of graduates are experiencing unemployment, a noticeable increase compared to

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earlier periods. While AI does generate a large number of employment positions in fields such as data science, machine learning, and automation management, its widespread application has already begun to replace many traditional roles—such as those in the service sector, including waitstaff—raising further concerns about employment prospects for recent graduates. Therefore, it is important to analyze the specific challenges university student will encounter in the future and to propose relevant strategies that can help reduce the pressure of transitioning into the workforce. In this paper, I will divide the discussion into several key areas—namely, psychological factors, structural job displacement, and institutional policy—to provide an in-depth analysis of employment-related issues in the AI era

2. New challenges

2.1. Inequality between supply and demand of employment in the new era

The number of entry-level jobs involving repetitive tasks such as writing, data entry, and programming has significantly declined due to AI technology, which has led to the elimination of many traditional and entry-level roles. Recent data released by a UK-based employment website offers strong evidence to support this trend [4]. Many companies are currently making substantial reductions in new hires. For instance, the number of fresh graduates recruited by large accounting firms has dropped noticeably—EY has reduced its graduate intake by 11%, while Deloitte has cut its program by 18%. Additionally, data from the job search platform Adzuna reveals that entry-level positions in the finance industry have declined by 50.8%, and those in the information technology services sector have fallen by 54.8%. This phenomenon clearly illustrates that large companies are already downsizing significantly, and it is likely that small businesses will follow suit—possibly with even more severe cuts.

Although AI has also created new job opportunities and career paths, such as positions for data analysts, machine learning engineers, prompt engineers, AI ethics specialists, and regulatory professionals, these roles are highly specialized and closely tied to AI-related expertise. Unfortunately, many students with a Bachelor of Arts degree often lack the competitive edge required for these roles. They may not possess the practical skills, mathematical or statistical foundations, or programming knowledge—such as proficiency in Python or R—that students in science or engineering disciplines typically acquire. Even students majoring in computer science are increasingly relying on AI tools like ChatGPT to assist with their academic work. According to a recent YouTube video, many university professors have expressed frustration with students using ChatGPT to complete essays and programming assignments. There are increasing number students are expelled from the university by using the AI tool to finish the final work when the Turnitin detect the high AI percentage [5].

2.2. Reason analysis

In the context of the rapid development of AI, the employment environment faced by university students has undergone profound and far-reaching changes. Several underlying reasons contribute to these challenges, which can be categorized into three major areas: psychological pressures, structural job displacement, and institutional policy limitations. These interconnected issues together illustrate the multifaceted difficulties that university students are likely to encounter in the AI era.

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2.2.1. The construction of the psychological environment of college students

University students are confronted with an increasing degree of uncertainty and instability in their career paths as AI continues to transform the employment landscape, potentially leading to substantial psychological consequences [6]. Each student who is currently enrolled in the university or has recently graduated will encounter psychological issues. In the event that the psychological condition is severe, such as depression, it will disrupt their normal daily lives.

Students often experience anxiety due to several factors. Firstly, social media platforms like Instagram, WeChat, and Facebook frequently showcase others' achievements, creating the impression that "everyone else is so excellent" [7,8]. Envy is common in such situations. According to Parrott and colleagues, envy arises when people perceive themselves as lacking compared to others who possess superior qualities [9]. Experiencing envy in these circumstances is normal and can trigger a range of reactions as individuals attempt to address these feelings [10]. Secondly, the unpredictability of future career paths undermines students' sense of self-efficacy. This is partly due to the disconnect between university departments, which often focus on students' career planning, and the realities of the job market outside academia, leaving students confused when facing these contrasting paths. Thirdly, there is growing societal pressure equating higher education with securing a position at a well-known company and earning a high salary. Combined with the increasing competition caused by AI, these pressures make it difficult for students to navigate the transition from academic life to social and professional adulthood, causing challenges in shifting from the role of "student" to that of a "working professional."

A significant behavior is responsible for the student's encounter with severe psychological challenges. The primary reason for the student's action is that the competition is not limited to their peers, but also encompasses the use of advanced technologies by numerous major businesses. The circumstance in which the advent of AI and other factors prompt students to commence their internships in the company as they prepare to enter their sophomore year (freshman summer holiday). The capacity of an individual to acquire practical skills in the company that universities do not teach students can be enhanced through the acquisition of additional internship experiences [11]. This section has the potential to enrich the content of a CV. Additionally, students can acquire the ability to handle their relationships with their colleagues in the business. Specifically, the manner in which an individual manages a business relationship is totally different from that of a school.

However, students who start internships early often experience significant stress, as they may feel excluded from social groups and suffer from decreased self-efficacy. Early exposure to demanding work environments can lead to negative feedback or social marginalization, which further undermines their confidence in their abilities. Additionally, the increasing prevalence of unpaid internships, unrealistic workloads (such as managing tasks like buying food or handling reimbursement processes), and limited support from companies contribute to chronic stress among students. There are also other workplace challenges students commonly face. These situations may discourage them from engaging with new theoretical knowledge and cause a loss of intrinsic motivation, making them resistant to adapting to advancing technologies in their future careers. According to Erikson [12], a critical stage of identity formation involves how young people experience and perceive themselves within the social environment. In other words, this stage is essential for developing a meaningful social role and adapting to an increasingly complex society.

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2.2.2. Structural job displacement

Apart from personal psychological challenges, structural job displacement represents another critical issue that must be addressed. The rapid advancement of AI has triggered a significant structural shift in the global labor market, leading to widespread job losses across numerous industries.

Several reasons contribute to the issue of structural job displacement. One major factor is the disconnect between university curricula and the practical skills demanded by leading enterprises. For instance, while modern companies increasingly emphasize interdisciplinary collaboration, data literacy, and analytical thinking, these important areas are often overlooked or insufficiently covered in traditional academic programs. Although the pace of AI is rapid, the process of adjusting educational policies is relatively lengthy. In other words, AI evolves faster than human institutions can respond. For these two reasons, the HR departments of each company prefer to employ skilled/talented employees/technology that can rapidly transition into productive roles and utilize the technologies, rather than investing an excessive amount of time in training new graduates or incompetent employees. To reduce labor costs for low-skilled positions, companies are progressively automating internal functions such as customer service, logistics, and accounting. For example, some universities, including Tsinghua, have even phased out accounting majors. This approach enables companies to cut training expenses and remain competitive in rapidly evolving markets.

A key issue contributing to structural job displacement is degree inflation. The saturation of the job market combined with the rapid expansion of higher education has created a situation where simply holding a higher degree no longer guarantees employment, especially unless candidates possess multidisciplinary knowledge and AI-related skills. While AI has a positive impact on employment by creating new roles in fields such as data science, automation management, and engineering, the number of jobs eliminated or displaced often surpasses the number of new positions created—particularly in low-skilled or routine-based sectors. According to Statista [13], the number of individuals expected to receive a bachelor's degree by 2031 is predicted to reach approximately 2,464,380, compared to 1,896,000 in 2019. This trend illustrates that the number of university graduates, including those with postgraduate or even doctoral degrees, will exceed the number of job openings available in companies [14]. As more students attain higher education, the job market becomes increasingly saturated, leading to academic inflation and the diminishing value of undergraduate qualifications. Unlike a century ago, today's bachelor's, master's, or doctoral degrees no longer guarantee full employment. Although certain positions remain resistant to displacement by AI, the overall demand has shifted toward multi-skilled candidates capable of working alongside AI systems or managing them directly.

2.2.3. Institution policy

Institutional policy is the aspect directly related to employment that is influenced by AI.

One key academic issue related to institutional policy problems is the approach taken by university career guidance centers. These centers tend to emphasize addressing short-term concerns, such as interview skills, rather than encouraging students to develop long-term career thinking, like critical thinking and strategic planning. In other words, the departments responsible for supporting students' career paths often lack a strong academic foundation. Tomlinson and Bloomberg [15,16] highlights this issue in the field, stating: "Higher education institutions have increasingly focused on short-term employability skills, such as interview techniques and teamwork, but often neglect deeper career management capacities and lifelong learning strategies that are essential for long-term career sustainability."

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Education, both within universities and beyond the classroom, is one of the most significant factors contributing to rising unemployment among students. In the face of rapid, AI-driven transformations in the labor market, the departments responsible for guiding students into employment in higher education institutions often struggle to keep pace with these changes. Most universities continue to rely on outdated job-seeking curricula that prioritize enhancing résumés and interview techniques, rather than focusing on the development of long-term, practical skills such as data literacy, programming languages like Python and Java, or critical thinking. As a result, students often lack the skillsets required to succeed in today's evolving job market. From a policy perspective, while the number of online platforms supporting youth employment and training is growing, many of these initiatives remain fragmented and short-term. For instance, Google Courses is an example of a website that provides AI-related training or STEM courses, and the participants can finally obtain certificates in the relevant field. However, there is frequently insufficient support available to social sciences graduates who are attempting to transition into new hybrid roles. Ultimately, the psychological distress and underemployment experienced by youth are further exacerbated by the lack of alignment between educational output and labor market demand.

3. Suggestion/strategies

Given the growing difficulties that AI is causing in the labor market, it is critical to develop relevant suggestions or strategies that will enable university students to adapt and prosper in the "highly competitive" society. As AI continues to dominate efficiency and capability, frequently outperforming humans in routine and analytical tasks. As a result, students must compete not only with their peers but also with intelligent systems that can complete complex tasks quickly and accurately. This change requires a broad response. It should involve personal adaptability, changes in institutions, and supportive policy frameworks. The following section offers a series of actionable strategies. These aim to reduce the negative effects of AI on graduate employment. They also help students build long-term career resilience.

3.1. Individual level

Each student must be equipped with practical skills, such as Python, which is essential in data analysis. In other words, encouraging student to use spare time to learn skills [17]. Additionally, students should be able to apply this practical skill in a wide range of situations.

Students can take full advantage of their time at university by obtaining relevant certificates and participating in competitions whenever possible. For instance, computer science certificates like CISA, finance certificates such as CPA or CFA, as well as teaching or psychology certificates. This certificate can be a valuable asset to students as they embark on their professional journey. Additionally, the skills acquired through the certificate learning process are considered lifelong and can enhance one's CV, as opposed to solely concentrating on the short-term skill of enhancing one's CV.

Emphasis should also be placed on developing "non-replaceable" soft skills, including communication, adaptability, and critical thinking. Communication is also essential and is in a similar position to practical skill. This situation is primarily due to the fact that the manner in which individuals communicate with customers or the manager of your department is crucial, as it can greatly influence career advancement within a company.

Attention to psychological well-being is equally important. Students can improve mental health through communication with friends and by taking breaks to travel and enjoy beautiful sights. It is

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also important to avoid spending all day studying or self-improving, as this can lead to increased stress rather than productive growth.

3.2. Regarding university

Universities should update their career guidance courses to emphasize the development of long-term skills. For instance, they can introduce various competitions or challenges and actively encourage students to participate, thereby enhancing their practical experience and employability.

Another important policy that universities worldwide should prioritize is the incorporation of practical internships as a mandatory part of graduation requirements.

Additionally, universities should provide accessible psychological counseling services to support the mental health and well-being of every student.

4. Conclusion

This project aims to demonstrate the challenges that university students and recent graduates face as they prepare to enter society. These challenges are divided into three main categories: psychological issues, structural job displacement, and institutional policies. Psychological problems often arise from feelings of envy triggered by social media posts, which can lead individuals to take excessive actions to compensate for perceived shortcomings. Structural job displacement primarily focuses on academic inflation, where the increasing number of degree holders devalues educational qualifications. Institutional policies highlight how education systems struggle to keep pace with rapid advancements in AI. In the final section, the project proposes strategies designed to support students navigating these challenges and seeking employment. These recommendations aim to boost their confidence and better prepare them to compete in today's highly competitive job market.

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