



ARTIFICIAL INTELLIGENCE IN COMMERCE

Ahmad Raza & Xianlong Yan

Elite Education Institute, Quay Street, Sydney 2000, Australia

Introduction

What are some of the ways to detect AI? What are the positive benefits of AI? What are some of the dangers of AI? It is sometimes claimed that in commerce, including business and law, artificial intelligence (AI) is more efficient than humans, for example, in compiling expository literature reviews or composing affidavits. Is there substantial evidence for this? When is it justifiable to utilise AI without breach of academic integrity? What are some of the ways to detect AI? What are the positive benefits of AI? What are some of the dangers of AI?

This paper aims to delve into artificial intelligence's (AI) significant impact on commerce and education, focusing on its efficiency, effectiveness and ethical implications. It examines AI's role in performing tasks traditionally handled by business and legal professionals, comparing AI's performance with human professionals regarding speed, accuracy, and reliability. The report is grounded in an extensive review of academic articles, industry reports, and case studies, highlighting AI's innovative capabilities and shortcomings.

Background

Since 2023, artificial intelligence (AI) has become the hottest business topic all over the whole world. The rapid development of artificial intelligence technology and related derivative products based on AI have already integrated into various fields in everyone's daily life, including education and business. The rise of AI technology has brought about a significant shift in how companies and legal entities operate, and the widespread use of AI products has also brought tremendous challenges to academic integrity. This capstone report will explore the role of AI technology in both the commercial and educational fields, detailing its evolution and current applications.

For the commerce sector, a vital aspect of this report is investigating AI's efficiency in performing tasks traditionally handled by business and legal professionals, such as writing expository literature reviews and affidavits. We shall compare AI's performance with that of human professionals regarding speed, accuracy, and reliability, providing valuable insights into AI's usefulness and effectiveness. The report will also build on case studies, academic articles, and industry reports to show practical evidence of AI's innovative capabilities and shortcomings.

Acknowledging that not all AI can be detected is crucial, especially concerning its implications for summative assessment in higher education (Kacena et al., 2024). This report will focus on the ethical application of AI technology, emphasising integrity. It will explore the

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boundaries of AI ethics, including discussions on teachers' ability to detect AI use. Understanding the varying detectability of AI use informs strategies for ensuring academic honesty and fair evaluation processes.

While AI technology development significantly increases the number of AI-powered tools on the market and people using them, distinguishing between human-made and AI-made content is undeniably more significant (Giudici et al., 2024). To that end, this report will thus also go into detail on various techniques and ways to detect appropriate data, which is highly important in areas where this critical matter is concrete.

This paper also extensively discusses AI applications such as performance boosts, improved decision-making, and innovation generation; simultaneously, the threats addressed will be considered, such as privacy violations, security breaches, plagiarism, and biases. A review of key literature explores AI's pervasive influence in commerce and education. It reveals a multifaceted understanding of AI's applications and implications. According to some researchers (Hoffman, 2014), AI is gaining popularity in education, and instructors widely use it to design projects and curricula. This will be a crucial background image illustrating AI's functioning in the education sector and the marketplace.

Moreover, Memon et al. (2021) and Scott (2024) show that artificial intelligence is even more efficient in professional tasks. The article of Memon et al. about graduate attributes in learning through AI-enhanced flipped classes, plus that of Scott, where AI influence is rising in business and legal realms, demonstrates that AI is slowly overriding many things and making processes efficient and effective. Moreover, it can affect genuine learning through its ability to personalise educational experiences and provide immediate feedback, potentially influencing students' independent exploration and critical thinking skills.

One of the main ethical concerns, especially those related to plagiarism and other aspects of academic integrity, becomes the salient point after including AI. Shannon's insights (2022, 2023) into higher education capstone projects, folios, and ethical aspects of AI application in research allow for the responsible use of AI in academic and research environments to be assessed from various perspectives. These works not only emphasise the necessity of being moral and honest, but they are also the mirror that demonstrates the spread of AI technologies in which everyone is responsible for preserving the appropriate ethical standards.

The problem investors face in the current AI age is the ability of AI-generated content to be distinguished. The solutions require some understanding of how AI can be constructed [Roeva et al. (2013) and Sotirova et al. (2022)]. As they target generalised neural nets and fuzzy evaluations for AI learning and university modelling, their contributions bring into focus the techniques of detecting machine-generated outputs, which is a cornerstone of information in both academic and professional fields. Since not all AI can be detected as of now, then we don't know what we don't know with the use of some AI: we rely on the integrity of the user to acknowledge its use.

Roeva et al. (2013) showcase AI's role in decision-making problems, while Ramachandra and Wells (2021) underscore the adaptability issues that AI offers education systems during unforeseen times such as the COVID-19 outbreak.

Key Issues

While applying AI to businesses is related to multiple critical challenges, which will help shape this analysis, it also prefigures the form and shape of the given analysis. Their moral aspect is also essential because automated intelligence can damage authenticity and provide an unintentional ground for affirming the current biases resulting from AI training on possibly skewed

data sets (Anser Shah, 2023). These ethical enigmas mirror the professional and the legal domain as the benefits of AI. The issues of fairness and the transparency of AI's decision-making capabilities that have raised ethical considerations are just a few examples.

The damages AI can produce by disrupting traditional job roles and operating models are undeniable. This endless competition for a place, though not dirty, causes human resources to now pick new abilities and skills and, in addition, face the challenge of the existence of superior AI by its performance in those areas in which it excels. Such a reformation will also require a dual process applied from another side: the application of technology and labour market development. Continuing professional development should include training in the use of AI to enhance the employment prospects of staff.

A critical domain to analyse is the adequacy of AI systems' rationality and creativity capabilities and the precision of their predictions, especially in areas like law where errors might have enormous consequences and negatively affect events. The correct functioning of such systems with their corresponding owners regarding taxation compatibility, for example, accuracy in information and supervision, is the element of their implementation.

For instance, the prickly question of privacy for large data-based systems is the key to success. We have some massive security breaches within government agencies and international companies in recent months. Thus, security and privacy concerns also remain on the agenda. Better safeguarding of the available information from data breaches coupled with stricter guidelines regarding its application is a must, as misrepresentation or improper utilisation of AI might damage its general image.

AI-generated content is sophisticated and faces an emerging difficulty in distinguishing from human-produced work. Such a distinction concerns the fundamental integrity of scholastic works and the faithfulness of information in business settings across different fields.

Importance of problems

The need for a deep understanding of AI issues is frequently encountered in business environments. Among the most critical ethical issues are the academic thinness of AI and its capacity to perpetuate biases, which, if addressed, can enhance both the equality and reliability of AI applications (Devillers et al., 2021). The AI-driven transformation impacting business and legal practices underscores the need for employees to acquire and adapt AI skills to remain competitive in the evolving technological landscape (Chen et al., 2023). The concept of 'human agency' in AI decision-making refers to the essential role of human judgment and oversight in the decision-making process, ensuring that AI actions align with broader ethical and societal norms. Reliability in AI is crucial, particularly in areas where decisions carry significant consequences, such as in law. It implies the consistent accuracy and dependability of AI systems, which is especially important given that AI decisions in legal contexts can have irreversible impacts, and studies suggest that while AI can process information faster than human lawyers, it lacks the nuanced understanding and ethical judgment that human professionals provide (Bankins et al., 2022).

Moreover, privacy and security issues are paramount in AI technologies, necessitating robust measures to safeguard sensitive information and ensure public trust. In academic and professional fields, distinguishing between human-generated and AI-generated content is vital for maintaining integrity and value. This distinction is typically achieved through digital watermarking and content-tracking technologies.

Balancing AI efficiency with human oversight is essential as it fosters a milieu where human traits like empathy and creativity can thrive, areas where AI still struggles to replicate genuine human emotions and creative thought processes (Shank et al., 2019). Ultimately, this

balance enables humans to tackle complex situations effectively, leveraging AI's capabilities while retaining essential human qualities.

Contrary to human experts, AI systems are mostly better at creating literature reviews and legal affidavits because they can undertake tasks quickly, comprehensively, precisely, and accurately. This is most noticeable in the case of AI systems and research, which proves that AI can quickly process excessive data (Mathur et al., 2021). AI integration has both positive and negative effects on business and law operating models, and hence, workflow and decision-making are impacted. AI contributes to improving productivity in some areas. However, it could seriously affect habitual practices, which will result in the need to change the roles and duties within those sectors.

Ethical issues regarding the usage of AI in the educational and professional domains are a matter of concern with time because of the difficulty of detecting some AI. Although AI usage eases the process, it could still become a problem in academia and the judicial system. The probability of accidental plagiarism and its impact on the originality of work is a particular issue. As a result, crafting ethical principles and best practices for AI applications becomes a significant issue. The guidelines established will ensure that the work is transparent and of high quality, ensuring that AI remains consistent with academic and professional standards.

Besides detecting fake AI content, Academic Integrity (the other AI) remains a pressing issue in AI analysis, particularly in educational assessments. In the academic setting, there are various assessment methods: formative assignments, summative assignments, and summative examinations, each requiring different approaches to maintain integrity when incorporating AI. Some ideas are canvassed in Table 1, so that students can use AI and realise when not to use it.

Table 1: Assessment and AI

Type	Assessment	AI Usage	Academic Integrity Tools
Formative Assignments	Open-book, at-home	AI can be used to assist in exploring concepts and generating drafts. Students should integrate their insights to ensure depth of understanding.	Regular feedback sessions; comparison of student submissions over time to monitor style and content consistency.
Summative Assignments	Closed-book, invigilated	AI is used in preliminary research stages under monitored settings. The final submission must reflect the student's synthesis and original thinking.	Plagiarism detection software (e.g., Turnitin); manual content review against course materials; confusion of technical terms with their everyday meaning; e.g, "group" in mathematics.
Summative Examinations	Traditional closed-book under supervision	AI-driven simulations or problem-solving tasks within controlled environments to test real-time application of knowledge.	Proctoring software for online exams; style and keyword analysis to detect inconsistencies in student writing. Oral testing of a random sample of students.

Further Understanding of Artificial Intelligence (AI) and academic integrity (ai)

Artificial Intelligence (AI) refers to the machines simulation of aspects of human intelligence, encompassing learning, reasoning, and self-correction processes. This technology is prevalent in everyday applications like virtual assistants, recommendation systems, and self-driving cars. On the other hand, academic integrity involves maintaining ethical standards in scholarly work, ensuring originality, proper citation, and honesty. In layperson's terms, AI is often seen as intelligent technology that performs tasks requiring human intelligence, while academic integrity means being honest and ethical in one's educational work. Non-IT professionals should understand AI's role in enhancing productivity, decision-making, and innovation across various sectors, as well as ethical considerations like data privacy and bias. They should also grasp the importance of academic integrity in maintaining the credibility of educational achievements and preventing academic dishonesty.

The significance of AI lies in its ability to improve efficiency and decision-making and foster innovation, making it a critical tool in fields like healthcare, finance, and retail. Academic integrity is vital for preserving the trustworthiness of academic institutions and ensuring that qualifications are earned honestly. Examples of AI include its use in healthcare diagnostics, financial risk management, and retail customer service. At the same time, academic integrity is exemplified through proper citation, plagiarism detection tools, and institutional honour codes. AI applications extend to natural language processing, computer vision, and robotics, whereas academic integrity is upheld through educational tools, research integrity offices, and the peer review process in academic publishing. Understanding these concepts helps individuals navigate the complexities of AI and maintain high ethical standards in their professional and academic endeavours.

Table 2: Projected profit and loss table

Company Name	Industry	AI User	Revenue (B)	COGS (B)	Op. Expenses (B)	Ex-Net Income (B)	In-Profit Margin
Amazon	Retail	Yes	514	244	170	30.4	5.9%
Walmart	Retail	No	608	470	120	21.9	3.6%
JP Morgan Chase	Finance	Yes	274	78	124	32.3	11.8%
Wells Fargo	Finance	No	189	52	84	13.0	6.9%

The financial analysis in Table 2 shows the implication of AI on the profitability of various retail and financial sector companies. Amazon's AI implementation won Amazon 5.9% as a profit margin and 3.6% as Walmart. This gives the clue that AI is more productive in simplifying operations. In finance, JP Morgan Chase, by use of AI, has an 11.8% profit margin over Wells Fargo, which is 6.9%; AI's role in increasing profitability through improved operations and customer service can be seen.

The trend is clear: AI adoption, as the research shows, is highly related to enhanced profitability. Though AI is not the only factor leading to success, it is a critical element in the fight to cut down on costs and improve decision and problem-solving. Though the initial investment in AI is expensive, it is outweighed by the long-term benefits. The actual effect of AI can be, thus, subjective, depending on how AI is incorporated in different industries in their strategies. Table 3 shows which industry will be impacted by AI and the reason for its impact.

Table 3: Current use of AI in various fields

Fields	Impact of AI	HOW?
Data Entry & Administrative Support	Decline	AI automates routine data entry and administrative tasks, leading to declining job roles (Chui et al., 2016).
Retail	Decline	AI-powered systems reduce the need for cashiers and basic customer service jobs (Besen et al., 2019).
Manufacturing	Decline	According to Acemoglu and Restrepo (2020), AI automation replaces jobs in regular tasks like assembly lines and machine operation.
Automotive & Transportation	Growth	AI is essential for improving traffic management and creating driverless vehicles (Maurer et al., 2016).
Finance	Growth	Arner et al. (2017) state that artificial intelligence enhances automated trading, risk management, and fraud detection.
Medicine	Growth	Drug discovery, personalised therapy, and diagnostics are all improved by AI (Topol, 2019).

Concluding Comments

This paper has attempted to investigate the fascinating penetration of artificial intelligence in business and educational areas. It has shown that AI can outperform humans in executing many tasks that previously required human intellect, such as explicitly writing a literature review and preparing a legal document. The cases of Amazon and JP Morgan Chase are the best examples of corporate AI integration, which helps the smooth functioning and profit of the companies. However, the AI-equipped firms, such as Tesco and Amazon, will outdo their non-AI competitors, such as Walmart and Wells Fargo, which, though impressive giants, will have efficiency and profit margin issues.

Lastly, this report has shed some light on the ethical implications of AI implementation. With the increasing use of AI-aided and human-created content, a solid moral framework must be established in the academic environment or a profession. Newly developed tools that discover AI-created content corroborate this, which is needed to maintain the sanctity of academic integrity and professional authenticity.

The enterprise's money story, as told through the income and expenditure statements, connects the AI accounts with the financial performance. AI-using entities usually use technological advantages to produce a broader ROI and higher net income. Nevertheless, this is only sometimes true; the involvement of AI in processes implies considerable capital vested and strategic expertise.

Our first recommendation is for businesses to invest significantly in AI whilst considering its long-term value rather than merely its short-term profits. For example, organisations such as Amazon and JP Morgan Chase demonstrate this approach's success with the boost of their earnings directly resulting from the successful implementation of AI. Businesses are advised to deploy AI to improve operational efficiency in tasks with a more significant impact, such as supply chain customer service and data analysis. Besides, companies should treat AI technology development as a longtime asset and a tool that can bring them a competitive advantage.

It is essential to be aware of the dangers associated with AI. These include privacy violations, where AI systems can access and misuse sensitive personal data, cybersecurity

threats involving sophisticated cyberattacks, and the propagation of biased information if AI is trained on biased datasets. Additionally, AI threatens job markets, potentially replacing human roles and causing economic and social challenges. Ensuring transparency in AI decision-making processes and developing robust ethical frameworks are crucial to mitigating these risks and ensuring responsible AI use.

However, balancing the advantages of AI and the dangers in its use is the delicate side of life. AI undoubtedly brings numerous benefits, including higher productivity, better decision-making ability, and creativity in different fields. With the development of AI technology, AI is expected to become even more crucial in future commerce and education. The ever-evolving AI technology calls for continuous control and change in how its usage is applied. This implies revisiting ethical issues, improving methods for detecting AI-generated content, and striking a balance between beneficial and risky when utilising AI.

From an academic perspective, this paper recommends using well-defined rules to regulate AI utilisation. This must involve policies that stipulate the acceptable use of AI in research and learning, as it should be seen only as providing support rather than replacing human effort and creativity. Identifying and preventing AI-generated plagiarism are crucial elements, and introducing high-level plagiarism detection tools is becoming more necessary.

Additionally, companies must address the ethical issues related to AI, including creating transparency in machine learning processes, ensuring fair AI algorithms, and actively working against biases. Developing an ethical AI framework is essential to prevent the loss of consumer trust and ensure compliance with established ethical standards. Such steps taken in advance are necessary to ensure that AI stays an instrument for good and a mainstay of human abilities rather than a substitute.

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