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Catalysing Global Research Excellence

ARTIFICIAL INTELLIGENCE (AI): Embracing the Future





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ABOUT THE MAGAZINE

RISE Magazine is published by Office of the Deputy Vice-Chancellor (Research and Innovation) with aims to highlight a research and innovation on multidisciplinary expert of fields in UiTM. It serves as a platform for researcher to showcase their high quality and impactful findings, activities and innovative solution through publication. Contribution of these ideas come from academicians, researchers, graduates and universities professionals who will enhance the visibility of research and stride to elevate Universiti Teknologi MARA to global standards. This is an effort to promote research as a culture that is accepted by all expertise.

ABOUT UITM

Universiti Teknologi MARA (UiTM) is a public university based primarily in Shah Alam, Malaysia. It has grown into the largest institution of higher education in Malaysia as measured by physical infrastructure, faculty and staff, and student enrollment. UiTM is the largest public university in Malaysia with numerous campuses throughout all 13 states in Malaysia. There is a mixture of research, coursework and programmes offered to the students. The Office of the Deputy Vice-Chancellor (Research and Innovation) also known as PTNCPI (*Pejabat Timbalan Naib Canselor (Penyelidikan dan Inovasi)*) serves as a *Pusat Tanggungjawab* (PTJ) for navigating the research and innovation agenda of the university to achieve UiTM's goals. The PTNCPI office strives to mobilize faculty and campuses, fostering collaboration among researchers, with the aim of transforming the University by 2025

ARTIFICIAL INTELLIGENCE in Sustainability

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Reporting





Conference on Economics, Business, and Economic Education Science (ICE-BEES) organized by Universitas Negeri Semarang, Indonesia, from 30th to 31st May 2023. The conference theme, 'Re-thinking the dynamization between environmental issues and adaptive technology for inclusive growth,' saw Prof. Corina delivering her speech titled "AI and SDGs: Resource-Based View Perspective."

In the speech introduction, various definitions of Artificial Intelligence (AI) were provided. One of these definitions describes AI as the utilization of automated algorithms, robotics, or machines that mimic human cognitive functions, enabling them to perform tasks such as learning, identifying, analyzing, and problem-solving (Graham et al., 2020). The rapid progress of AI has been facilitated by the extensive use of other technologies like machine learning methods for structured data, modern deep learning, and natural language processing for unstructured data.

Today, AI is being employed to tackle socioeconomic and environmental sustainability challenges, contributing to the achievement of the Sustainable Development Goals (SDGs). For instance, in realizing SDG 6 (Clean Water and Sanitation), AI is being utilized to improve crop yields and reduce water consumption in agriculture. Prof. Corina highlighted the success of PepsiCo, which has effectively employed AI to assist farmers in the field. By collecting over one million key data points about potato cultivation in North America, Latin America, and Europe, farmers can



use machine learning to identify improvements and optimize yields. This sustainable approach results in reduced water usage, fewer pesticides, and lower greenhouse gas emissions, making PepsiCo's farming practices more environmentally friendly.

Prof. Corina also emphasized how AI could drive advancements in sustainability reporting, which is a crucial tool for achieving SDGs. The rise in AI usage aligns with the growing importance of sustainability reporting, also known as Environment, Social, and Governance (ESG) reporting. AI's analytical capabilities can help prevent organizations from providing misleading information, known as greenwashing. Moreover, sustainability reporting in organizations has encountered various challenges, including poor data quality, lack of data comparison, different reporting guidelines, unclear directives, and limited resources. AI can address these challenges by offering superior capabilities in data collection and verification, target planning, performance-based revisions, as well as automating reporting and analysis processes. By leveraging AI technology, companies can streamline the gathering and analysis of data, enhancing the accuracy and reliability of their sustainability reports.

Al is particularly effective in collecting and analyzing large volumes of sustainability data from diverse sources, such as social media, news articles, and internal company reports. By utilizing Al algorithms, companies can identify patterns and trends within sustainability data, which can inform both sustainability reporting and decision-making processes. This not only saves time and effort but also provides valuable insights for companies to make informed and impactful sustainability-related decisions.

Artificial Intelligence in sustainability reporting can be viewed as a valuable resource that offers a competitive advantage based on four criteria: valuable, rare, difficult to imitate, and non-substitutable (Barney, 1991). Firstly, AI is valuable as it provides essential information for decisionmaking processes in sustainability reporting. Secondly, the use of AI in sustainability reporting is rare, as not all <u>organizations</u> possess the technological capabilities to



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In her concluding remarks, Prof. Corina suggested areas for future research, such as conducting case studies of organizations extensively using AI in sustainability reporting. These studies could explore AI's potential in improving stakeholder engagement within sustainability reporting and identify best practices for utilizing AI to facilitate stakeholder engagement effectively. By delving into these research areas, the potential of AI in shaping the future of sustainability reporting can be further understood and harnessed for the benefit of businesses, society, and the environment.



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