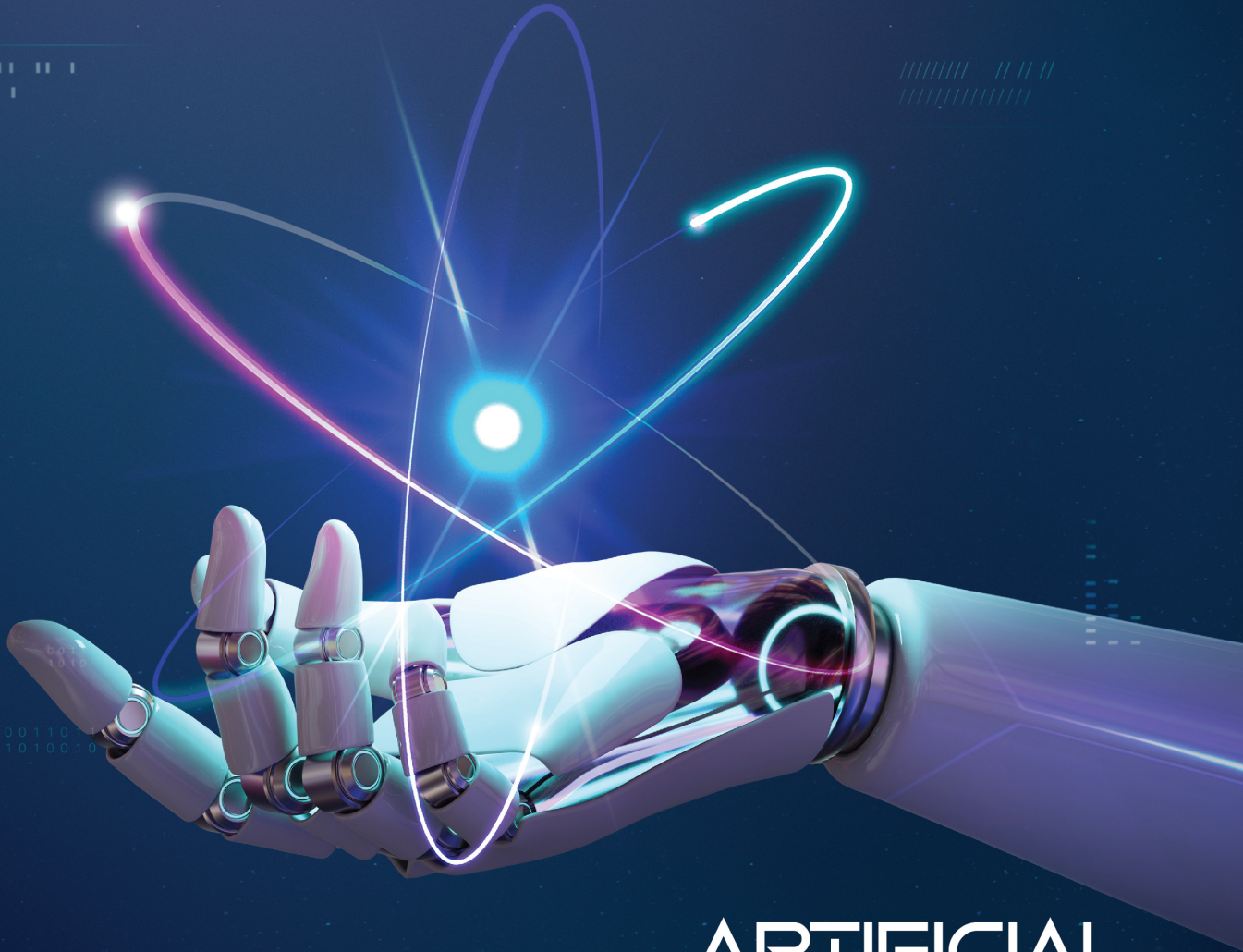


# RISE

*Catalysing Global Research Excellence*



ARTIFICIAL  
INTELLIGENCE (AI):  
Embracing the Future

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# RISE

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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 into a Globally Renowned University by 2025



**Dr Azliza Mohd Ali &  
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# Perspectives on the Governance, Standards, Talent Development, and Regulation of Artificial Intelligence in the UK: Visit by the Malaysian Delegation (13 - 16 March 2023)

**I**n 2021, Malaysia has published its National AI Roadmap (also known as “AI-RMAP”), which examined the development of Malaysian AI ecosystem. AI-RMAP provided suggestions for steps to realise Malaysian AI vision. In keeping with this national aspiration, selected Malaysian researchers, innovators, and government officials, through the Science and Innovation Network of the British High Commission (“BHC”), Kuala Lumpur had a working visit involving leading research centres and universities as well as key government institutions in the United Kingdom from 13 to 16 March 2023. The purpose of the visit was to promote knowledge sharing and cooperation between Malaysia and the UK in relation to the advancement of artificial intelligence (“AI”) technologies.

Through this trip, the UK hoped to introduce key players and AI initiative & technologies to Malaysia's delegation from the Ministry of Science, Technology, and Innovation and the AI Consortium, a networking organisation for Malaysian AI researchers.

By collaborating with top-tier AI institutions in the UK, the visit has the aim of fostering AI research, innovation, and development in Malaysia. As stated in the Strategic Initiative 1.4 of Malaysia's National AI Roadmap, the members of the delegation also seek to address concerns in relation to the governance, standards, and legislations applicable for the use of AI technologies. This will entail locating possible UK advisors and creating plans to guarantee efficient AI governance. This initiative will be coordinated by Universiti Teknologi Malaysia (UTM).

of Malaysia's National AI Roadmap. The Ministry of Entrepreneurs and Cooperatives Development (MECD) will oversee promoting small and medium enterprises (SMEs) and industry cooperation with UK-MY AI researchers.

Finally, as part of the plan to develop Malaysia's national AI code of ethics and strategies for the adoption and implementation of AI in Malaysia, the members of the delegation engaged in benchmarking activities during the visit. This is a part of UTM's Strategic Initiative 1.4 of Malaysia's National AI Roadmap.

During the journey to London, the members of the delegation (see Table 1), who represented MOSTI, BHC, UTM, UKM, UiTM, UPM, University of



## MALAYSIA NATIONAL ARTIFICIAL INTELLIGENCE ROADMAP 2021-2025 (AI-RMAP)



The development of our talents is a key component of our visit. For the members of the public and educators in Malaysia, the members of the delegation intend to develop an effective AI awareness and education programme. This is essential to successfully implement AI technologies in Malaysia. This initiative is a part of the Strategic Initiative 4.1 of Malaysia's National AI Roadmap, and it will be led by the Ministry of Higher Education (MOHE), Malaysia.

The members of the delegation will also draw on the UK's expertise in defining precise rules and promoting data sharing in the public and private sectors, which is essential to drive AI implementations. MOSTI/MRANTI will oversee this project, which is referred to as Strategic Initiative 3.2

Nottingham Malaysia, and MIMOS, visited several organisations. The delegates met with Rose Woolhouse, Head of the International Office for Artificial Intelligence Department for Science, Innovation, and Technology; and Joseph Phillips, SIG-Science, Research, and Innovation representative from the Office of AI, UK on 13 March 2023 at the Office of AI. We talked about the UK government's AI strategy and its emphasis on talent development, innovation, and research and development.



Figure 1. At the BEIS Conference Centre, female delegates met with Professor Judy Wajcman (from left, Associate Professor Dr. Shuzlina, Dr. Uswah, Ms. Poorani, Professor Rose, Professor Judy, Professor Dr. Hazlina, Professor Dr. Masri, Professor Dr. Salwani, and Dr. Azliza)

The delegation met Professor Judy Wajcman at the BEIS Conference Center later that day. She is a renowned sociologist and the project's Primary Investigator at the Alan Turing Institute's Women in Data Science and AI Initiative. Additionally, she serves as an adjunct professor at the Oxford Internet Institute. Professor Wajcman spoke about the underrepresentation of women in AI, notably in terms of financing and employment possibilities. She emphasised the need to change corporate culture, which frequently undermines family culture and is unsustainable for women. The group was informed of the UK government's initiatives to overcome the gender gap in the AI sector. In order to encourage women to rejoin the workforce in light of the workforce shortage brought on by Brexit, the government promised an additional childcare assistance in the 2023 budget. In addition, the government intends to introduce a bill to protect users against hate speech and child pornography online. The talk with Professor Wajcman was enlightening and pertinent by the group because Malaysia is similarly experiencing the struggle to ensure gender diversity and inclusivity in the field of AI.

The delegation visited Imperial I-X and the Central Digital Data Office (CDDO) on 14 March 2023. The CDDO has the role of ensuring that the UK government makes the most of data as an asset, and it encourages the use of data-driven technology to keep the UK at

Table 1. List of Malaysian Delegates

|     |  |   |
|-----|--|---|
| 1.  | Dr. Arwan Sabri                        | Ministry of Science, Technology, Innovation             |
| 2.  | Ms. Poorani Krishnan                   | British High Commission KL                              |
| 3.  | Prof. Dr. Hazlina Selamat              | Universiti Teknologi Malaysia                           |
| 4.  | Dr. Rose Alinda Alias                  | Akademi Professor Malaysia                              |
| 5.  | Prof. Ts. Dr. Ali Selamat              | Universiti Teknologi Malaysia                           |
| 6.  | Prof. Dr. Masri Ayob                   | Universiti Kebangsaan Malaysia                          |
| 7.  | Prof. Ts. Dr. Salwani Mohd Daud        | University Malaysia of Computer Science and Engineering |
| 8.  | Assoc. Prof. Dr Abdul Hadi Abd Rahman  | Universiti Kebangsaan Malaysia                          |
| 9.  | Assoc. Prof. Dr. Shuzlina Abdul Rahman | Universiti Teknologi MARA                               |
| 10. | Assoc. Prof. Dr Lim Chin Seong         | University of Nottingham Malaysia                       |
| 11. | Dr. Azliza Mohd Ali                    | Universiti Teknologi MARA                               |
| 12. | Dr Uswah Khairuddin                    | Universiti Teknologi Malaysia                           |
| 13. | Ts. Dr. Luthffi Ismail                 | Universiti Putra Malaysia                               |
| 14. | Dr. Hon Hock Woon                      | MIMOS Berhad  |

the forefront of the global digital economy. Members of delegation learned about the Algorithmic Transparency Recording Standard (ATRS) at the BEIS Conference Centre. ATRS was created by the UK government to encourage transparency in the use of algorithmic tools in public decision-making processes. It offers a framework with applicable processes that are easy to be understood in order to assist public sector organisations. The ATRS is intended to facilitate better coordination and efficient application of algorithmic tools to support the provision of public services. Seventy eight percent (78%) of the members of the public believes that transparency is critical in how their personal information is shared among government agencies, according to a report by the Center for Data Ethics and Innovation Research. When using algorithms to deliver services, many public sector organisations are currently unsure of the ways to be transparent.

The delegation met with Dr. Islem Rekik, Dr. Alex Page, and the Imperial I-X research team at the White City Campus later in the afternoon. The founding of I-X aims to accelerate change in digital technologies, data science, and artificial intelligence. I-X, which was introduced in March 2021 and is centred at Imperial's White City Campus, offers a new co-located collaborative environment for research, education, and entrepreneurship across several sectors. The I-X programme serves as a model for the university of the future, one that pursues extensive and significant partnerships with the business and the public sector. It offers cutting-edge cross-cutting educational initiatives, including in digital technology. In order to deliver research and education in a digital environment, the project acknowledges the importance of co-location facilitation. Through a physical co-located space and a cutting-edge environment for virtual collaboration, it seeks to develop novel approaches for research, teaching, and innovation. The virtual platform builds on the successful adaptive reaction of the Imperial College to the COVID-19 epidemic by utilising established interactive teaching and collaboration facilities to promote relationships across interdisciplinary academic teams across its campuses. I-X seeks to closely integrate and co-locate industry with the research and academician of the college. The efforts aim to enable collaborations for businesses and nonprofit laboratories across disciplines to help them with problems which could do not be addressed on their own. The visit provided a chance to discuss prospective areas for collaboration and to exchange information on the most recent advancements in artificial intelligence, data science, and digital technology. The delegation also had a meeting with Mr. Rodney Kelly, Senior Advisor at Eastern AHSN, a division of the NHS that

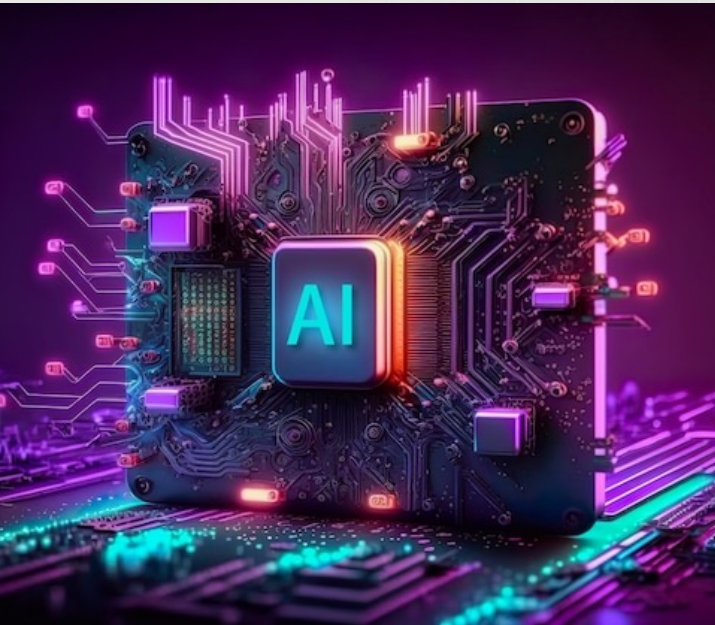
seeks for innovations to support the NHS. The Eastern AHSN examined the funding and administration of technology transfer processes and indicated interest in locating innovators in Malaysia.

On 15 March 2023, Mr. Dave Gibbs, Education Strategy Lead at STEM Learning, National Centre for Computing Education Consortium (NCCEC), and delegates had a virtual meeting. Mr. Gibbs emphasised that all children in the UK, from the age of five to sixteen, are required to complete the computing curriculum. Mr. Gibbs also claimed that some schools' computing curricula have been supported by DeepMind, a company owned by Alphabet.

The course material includes the basics of AI, algebra, data processing, algorithms, and computer science. Mr. Gibbs added, that since a number of teachers lack solid foundation in the math behind AI, the present emphasis focusses on educating the teachers about its application. To close this gap, universities are working with regional educators and through business collaborations. The NCCEC are seeking those who wish to support them, because it is difficult to get all schools up to speed on AI. Mr. Gibbs linked the significance of funding for teachers (scientific and computing) with the achievement of STEM learning. Mr. Gibbs also discussed the programme of STEM ambassadors, volunteers from business or research who visited schools to talk about their jobs, the skills required, and the courses they have studied in school. Mr. Gibbs acknowledged that education and knowledge are the main priorities in schools.



Figure 2. Center for AI at the University College London



The delegates visited University College London's (UCL) Center for AI in the afternoon of day three. A number of people were met during the visit to address various issues with artificial intelligence and sustainability. The Strategic Alliance Director, UCL, Mr. Tim Bodley-Scott, spoke on partnerships between UCL and business partners while emphasising the value of cooperation to address societal challenges. The MSc AI for Sustainability Program Director, UCL, Dr. Maria Perez Ortiz, spoke about the program's curriculum and how it prepares students to utilise AI to address sustainability issues such as climate change and biodiversity loss. In relation to UCL's connections with foreign institutions and universities, Mr Marco Piccionello, Director of Strategic Alliances, UCL, emphasised the significance of international cooperation in developing research and innovation. The Vice-Provost for Research, Innovation, and Global Engagement, UCL, Dr. Amit Khandelwal, talked about UCL's research goals, including the application of AI and data science to tackle global concerns. Dr. Khandelwal also emphasised the significance of ethical AI and the need for it to be considered throughout the creation and application of AI technologies.

The delegation met with representatives from the Digital Environment Research Institute (DERI) at Queen Mary University and the NHS AI Lab team on 16 March 2023. The NHS AI Lab team gave the delegation an overview of the largest AI evaluation programme in the world involving review of 86 projects across 99 hospitals. This had affected an estimate of 300,000 persons.

The NHS AI Lab also emphasised the necessity to inform healthcare practitioners about AI and data governance; and the significance of regulating the use of data for AI. The delegation gained knowledge at DERI regarding the use of AI in biomedicine and healthcare, as well as the importance of ethics and of having reliable AI. The delegation also visited selected DERI researchers, among others, Dr Shanxin Yuan (computer vision researcher) and Professor Simon Lucas (group leader) to discuss their teaching works of game AI to PhD students.

The visit gave the members of the Malaysian delegation thorough insights regarding the most recent advancements and applications of AI across many industries in the UK. This includes knowledge about the difficulties and possibilities presented by AI, as well as the significance of developing and utilising AI in an ethical and responsible manner. The visit also emphasised the importance of industrial, academic, and governmental cooperation in fostering AI innovations and talent developments.



Figure 3. Delegates from Malaysia at the Westminster