

How Is Malaysia Navigating the AI Revolution?

Local: “Did you know Malaysia is run by AI?”

Expat: “Oh really? Is Malaysia that advanced already?”

Local: “Ofcos lah, AI is Anwar Ibrahim!”

Like all new technologies that will likely have a broad impact on society, Artificial Intelligence (AI), and specifically the development of large language models (LLMs), has caused both a degree of unease, and a massive hype.

In Malaysia, the debate around AI has largely been framed as one of opportunity. According to the government’s National AI Action Plan, Malaysia will be transformed and achieve “AI Nation Status” by 2030.

There will be investments in talent, infrastructure, governance and technology, which includes not just AI, but also blockchain and quantum computing. If the government is to be believed, AI will be an economic growth engine, and citizens’ lives will be transformed for the better.

It sounds impressive, but what does AI really mean for Malaysia?

MALAYSIA’S POSITION IN GLOBAL AI VALUE CHAINS

Very few countries have all the different components that enable the development of advanced AI systems. The chatbots you use on your PC or mobile device are based on multiple layers of technology.

The AI value chain begins with advanced chips which can perform billions or even trillions of parallel calculations each second. Malaysia is involved in many different parts of the semiconductor supply chain, but the most advanced AI chips are typically produced in Taiwan and South Korea and often designed in California. However, Malaysia is also

actively upgrading its semiconductor sector, and especially Penang and nearby Kedah continue to attract large-scale investments in the sector and may well start producing advanced AI chips in future.

The AI chips are used in large data centres, and here the centre of attraction moves south to Johor. With Singapore limiting data centre investment, Johor has attracted large spillover investments, both from foreign investors (both Chinese and American), as well as domestic investors, notably YTL Power.

While Malaysia’s political neutrality between China and the US, and inexpensive land and utilities have

made it a data centre magnet, there is also concern about the benefits that data centres can bring to the local economy. Critics argue that data centres consume large amounts of resources and provide only limited local employment and economic value-added, as high-value hardware is imported and design and engineering are done abroad.

Once the data centre is up and running, it needs AI models. Although Malaysia doesn’t have any indigenously developed base LLMs (Large Language Models), it does benefit from the many open weight models that are now available. Especially Chinese AI companies, but also European and American ones, have made their AI models available for free, allowing anyone to install, use and adapt them.

Malaysia has the capabilities to adapt AI models. Malaysian start-ups such as Mesolitica have developed their own models for niche applications, such as understanding Malaysian slang and dialects in a challenging multilingual and multicultural environment.

The training of base models is partly restricted by the availability of data. The fact that Malaysia has a relatively small population which only generates a fraction of the data of countries like China, puts it at a disadvantage in training LLMs from scratch. However, given that these models are available for free, the playing field is largely equalised.

THE WINNERS AND THE LOSERS

While proponents are keen to highlight the benefits of AI, some

WHY ARE LLMS AVAILABLE FOR FREE?

It may seem like bad business for leading AI companies like Meta, Alibaba or Mistral to make their AI models open to anyone, but it is part of a broader business strategy. Publishing their models is a form of advertising, helping attract both talent and customers, and it allows others to improve their models further, helping everyone learn. However, it is also a way to undermine competitors like OpenAI (makers of ChatGPT), whose models are all closed. By making sure that the free open-weight models are almost as good as the proprietary models, other businesses in the AI value chain can capture larger profits.



sectors of the Malaysian economy are already feeling the impact of AI disruptions.

One area that expats may be familiar with is the Business Process Outsourcing (BPO) sector. Typically low to medium-skilled tasks, which used to be outsourced to lower-cost locations like Malaysia, India or the Philippines, are now being automated by AI.

In a similar way, many low-level jobs in computer programming, accounting, marketing and design are being replaced by AI, especially for smaller projects, or by SMEs (Small and Medium Enterprises), which tend to be more cost sensitive. But even areas such as legal advice, strategy consulting, finance and education may not be immune from AI disruptions.

However, for many SMEs, AI has been a blessing. Unable to afford quality professional services, they can suddenly generate business plans, respond to complex customer complaints, and analyse their finances with an AI chatbot. With over 97% of businesses in Malaysia being SMEs, AI could become an equaliser in the business world, as having imperfect but inexpensive artificial intelligence is much better than having none at all.

Another perspective is that many service professionals will work with AI, automating routine parts of the job and leaving more time for the most difficult questions and for human-to-human customer relations.

WHAT'S NEXT FOR MALAYSIA?

Given the economic importance and societal impact of AI, the issue of AI sovereignty is often raised. Can a country still exert control over its national AI system, as it does over its transportation, telecommunications or energy system?

Small countries like Malaysia can never have control over the entire AI supply chain. Even China and the US find themselves depending on key foreign partners, whether it's critical minerals or specialised components and machinery.

However, small countries can try and preserve their freedom to choose, by maintaining their strategic autonomy. This strategy is based on avoiding lock-in by ensuring that technological systems remain modular, and by always maintaining two or more potential suppliers.

Thus, if Malaysia cannot source chips from one country, it can source them from somewhere else, because the

chips are compatible with other parts of the AI systems, and other suppliers exist.

Maintaining strategic autonomy in high technology has become a policy priority for the US, EU, Japan, South Korea and many other countries. Malaysia has benefited economically from this by attracting strategic investments, such as Infineon Technologies' €5 billion chip plant investment in Kulim, which was supported by German government financial guarantees, and a recent deal under which the Kuantan plant of Australian-owned Lynas will supply rare earth minerals to the US arms industry. At the same time China has invested in key infrastructure projects such as the East Coast Rail Link (ECRL).

In this sense, Malaysia is increasingly attractive as an investment destination and trade partner due to its political neutrality.

However, one area of concern is Malaysia's low R&D expenditure, which has fallen from 1.44% of GDP in 2016 to 0.95% by 2020. While Malaysia has high ambitions of raising its R&D expenditure to 3.5% by 2030, such targets do not seem to be supported by actual spending, both from industry and the public sector.

While Malaysia is well-positioned to realise many of the potential benefits of the AI revolution, it needs to invest and regulate strategically to make sure Malaysian businesses and Malaysians themselves are able to seize these opportunities. ■

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