



POST-WEBINAR

Webinar Topic:	Harnessing the Potential of GenAI in Singapore and ASEAN
Date / Time:	Saturday, 31 Aug 2024, 10:30 – 11:30 AM
Synopsis:	<p>Generative AI (GenAI) has garnered global attention as a form of artificial intelligence that produces content in response to user prompts. Poised to play a transformational role in our lives and society, observers have predicted that the emerging technology would boost productivity and revolutionise the way content is created, potentially accelerating progress across a whole spectrum of industries.</p> <p>Alongside its potential, GenAI presents significant challenges. It can be exploited to enable unethical or criminal activity, reproduce human bias, and disrupt traditional industries, potentially displacing jobs. As GenAI advances, there is a growing need to develop robust regulations, legal frameworks, and policies to address these concerns. Furthermore, given its cross-border implications, ASEAN countries must look towards collaborating on regional regulations and frameworks to govern GenAI effectively within and beyond national boundaries.</p> <p>In this webinar, we will highlight the emerging challenges and opportunities present in this sector, including how it revolutionised the future of work in the region. We will also explore how youths in ASEAN can navigate the evolving landscape of GenAI to create a productive, secure, and inclusive future for all.</p>
Video(s):	<p>KI Campus: Generative AI explained in 2 minutes https://www.youtube.com/watch?v=rwF-X5STYks</p> <p>CNA: Singapore seeks international feedback on proposed generative AI governance framework https://www.youtube.com/watch?v=CJEaRmSm1tA</p>

Speaker(s):



Mr. Josh Lee

Mr. Josh Lee is the Managing Director (APAC) of the Future of Privacy Forum (FPF) as well as Advisor (Technology, Media and Telecommunications) in Rajah & Tann Asia. He is an adjunct professor (AI Law, Policy, and Ethics) at SMU Yong Pung How School of Law. He is also Director and founding Chairperson of the Asia-Pacific Legal Innovation and Technology Association, and a member of Singapore's Law Reform Subcommittee for Robotics and AI. He previously served in the Personal Data Protection Commission, working on AI governance policy making.



Ms. Yue Yean Feng

Ms. Yue Yean Feng currently spearheads IBM's Corporate Social Responsibility (CSR) and University Programs across Greater China, Korea, ASEAN and Australia/ New Zealand. Yean Feng is passionate about skills development and creating social impact – especially in training the next generation to improve the world with technology innovation and strengthening the alignment between industry and academia. She works closely with academia, tertiary institutions, government and non-profit organizations across Asia Pacific to co-create learning roadmaps - targeting students and adult learners - in building a workforce for the future.

Social Media / Media:

N/A

What you have learnt

Generative AI (GenAI) is poised to significantly improve the efficiency of everyday tasks at scale and is likely to shape the skills required for the future workforce. GenAI refers to a form of artificial intelligence technology that can 'generate' tangible outputs (images, text, audio, etc.) when prompted, by learning from a vast pool of raw data. If harnessed and regulated properly, it holds the ability to significantly augment and expedite everyday working processes across different sectors. Given the wide ranging implications, at the government level, regional bodies should look towards collaborating to govern the growing GenAI space in an interoperable and inclusive manner. An effective regulation of such technologies will ensure that bias and misinformation will not be perpetuated and erode the underlying trust within our societies.

Artificial Intelligence and GenAI

Artificial intelligence is not a recent phenomenon and began as a field of study in 1956. Recent developments have arisen with increased capabilities of computing power in crunching big data and statistics. ANI (artificial narrow intelligence) seeks to achieve narrow, stipulated goals while AGI (artificial general intelligence) pursues the ability to achieve an unlimited range of goals, even setting those which may not exist yet.

GenAI manifests as a form of Machine Learning (ML), using software to identify patterns in large pools of data that then allows it to build similar models automatically. As a subset of ML, GenAI falls under a further subset of Deep Learning (DL), which utilises a composition of multi-layered neural networks akin to the brain's architecture to perform tasks such as speech and image recognition. It is now widely recognised that GenAI is a general-purpose technology: it will cut across and impact all sectors and industries.

Risks and Ethical Concerns

The risks of AI, however, range from potential ethical concerns and data privacy breaches to sustainability concerns. A key risk with GenAI is hallucination, which occurs when a software presents a grammatically or pictorially sensible piece of information as a fact, but it is overtly false. These falsely produced information can then be used for malicious purposes. It then remains increasingly difficult to distinguish truth from falsehoods, given the enhanced complexity of the generated output.

Other challenges include identity and privacy, as AI systems can scrape personal data off the web and provide free, unrestricted access (eg Common Crawl). In addition, sustainability is a major concern, when considering the vast amounts of energy required for the gargantuan computing capabilities of these complex systems.

Singapore's Governance Approach

Singapore has been taking various national approaches to AI governance, with ongoing efforts around the Model AI Governance Framework, with two editions already released in 2019 and 2020. The framework seeks to provide practical recommendations for the responsible deployment of AI systems in four key areas of i) Internal Governance Structures & Measures, ii) Determining the Level of Human Involvement in AI-Augmented Decision Making, iii) Operations

Management and iv) Stakeholder Interaction and Communication. It spotlights the need for explainable, transparent AI solutions that are human-centric, targeted towards organisations looking to set up AI-integrated solutions themselves.

Singapore has also established an Advisory Council on the Ethical Use of AI and Data, adopting a multi-stakeholder approach to gather views from stakeholders across sectors (tech providers, deployers, government, academia and civil society). This Council seeks to provide guidance to the government and public on ethical issues arising from the latest innovations and business models. Singapore has also developed the world's first AI governance testing framework and toolkit in the form of, A.I. Verify. The tool employs a testing framework over 11 internationally accepted AI ethics principles to verify the claimed performance of various artificial intelligence systems. This initiative seeks to create mutual trust between businesses and stakeholders, while facilitating greater interoperability of international AI governance frameworks and cross-border business operations to contribute towards robust international standards.

Singapore has remained at the global forefront of AI governance initiatives with the Model AI Governance Framework on Generative AI, rolled out in February 2024 and inspired heavily by the 2020 edition of the Model AI Governance Framework. It instills the perspective that there needs to be a separate approach to tackling the specific problems that GenAI poses, in a manner that encourages alignment and interoperability. Current frameworks remain targeted at predictive artificial intelligence systems, but efforts are underway to develop relevant stakeholder guidance tailored to the unique impacts of GenAI.

Regional Governance Approach

Other major ASEAN member states have also made progress in the path towards robust AI governance, though progress remains in the form of soft legislation. Malaysia currently adopts a soft law approach to AI governance but is expected to finalise the "National Guidelines on AI Governance and Ethics for Responsible AI" by the end of 2024. Indonesia currently mirrors this soft law approach, but a circular on AI ethics was released in December 2023 announcing intentions to develop a Presidential Regulation on AI usage. Thailand has also recently announced a set of AI Governance Guidelines would be proposed to the Cabinet.

Similarly, when it comes to region-wide governance, ASEAN released the Guide on AI Governance and Ethics in February 2024 that draws direct inspiration from the 2020 edition of Singapore's Model AI Governance Framework. It seeks to provide guidance to organisations across ASEAN and encourage governments to strive for interoperable and aligned standards.

GenAI Applications and Emerging Opportunities

GenAI's applications within a youth context extend far beyond research and assignment guidance. Other uses include sports, entertainment healthcare and business.

Humans must be able to put AI to work, and not the other way around. The future is all about being able to leverage this technology. The disparity between those who maintain an understanding of AI literacy and those who do not is only set to widen if we do not adopt this baseline knowledge. Today's youth must position themselves to seize these emerging

opportunities, with corporate roles looking for certain skills which new graduates can augment. The notion of skills-based, lifelong learning when it comes to technology must be instilled. Modular and flexible AI courses should be able to address the varied needs for different profiles.

AI must be made trustworthy and transparent, with developers being able to explain their solutions and reduce implicit biases within their technologies. This need for accountable AI will see a lot more jobs created in AI governance, policymaking and expertise divisions in enterprises. Non-tech job roles will be augmented with an infusion of AI into administrative tasks, dramatically reducing the time spent on them. Alongside GenAI, there are other types of AI that filter and suggest content to assist in the decision-making process.

Today's youth is at the frontline of the global fight for trustworthiness and responsibility in AI. Building AI literacy, actively calling for responsible software and sharing good practices with the rest of society will increase baseline societal understandings of AI and equip the workforce of tomorrow with the necessary skills to harness this potential.

Your questions answered:

1. What do you think are some of the biggest threats that GenAI poses to us?

Ms. Yue shared that it is crucial we recognise the limitations that exist concerning the lack of originality, incomplete information, bias and even the unsustainable impacts of such large amounts of computing power. She highlighted the necessity of maintaining the discerning human touch in working with GenAI, maintaining tech and soft/critical course skills (analytics, design thinking, problem solving, etc.) that we must preserve to overcome and better understanding AI's limitations and ethical issues.

Mr. Lee shared that deep fakes and disinformation remain the biggest threats, where a loss of control over GenAI underlines a bigger concern of how tech is set to develop and the kind of preventive guardrails we need to put in place. False information, in his opinion, affects the bedrock of trust that we implicitly apply to our daily societal interactions. Deepfakes can go viral even before there is time for verification, and it could jeopardise understanding and trust between one another.

2. How has AI changed the way we communicate and build communities within Singapore and the ASEAN region? Do you think it is important to level up the AI knowledge across Asia?

Ms. Yue reiterated the importance of understanding basic AI application across our regional industries. Southeast Asia has the ability to make AI's potential come to life, given the vast amounts of information available for cross-border application sharing. A cross-border exchange can ensue, where countries like Singapore who are at the forefront of employing digital solutions in advanced technological industry can proliferate best practices to neighbouring economies. In

return, countries with greater sectoral experience in agriculture and tourism can demonstrate to Singapore the best application of AI to stimulate growth in these areas.

Mr. Lee shared that he believes AI has already changed global community building, citing how social media platforms already use recommended algorithms that prioritise which information to show users based on collected data. Furthermore, GenAI is impacting our region on a deeper level, as it is already being used in political campaigning across our region and plays a larger role in how we build trust and garner support. It is therefore crucial for us to level up AI knowledge regionally, by knowing how to operate software and distinguish outputs. It is crucial to have a healthy dose of cynicism, where we trust but verify. AI is something that will continue to bring a lot of benefits to our region, such as the development of the SEA-LION large language model (LLM) that is trained on content produced in our region's diverse languages.

3. What are some ways to identify deepfakes? What can an individual do if they discover that personal data/images have been unintentionally leaked/modified without permission online?

Mr. Lee shared that looking more closely at images will help to identify features such as blurry edges and fuzziness of colours, that are telltale signs of deepfake technology. However, he highlighted that the technology is perpetually learning and improving, and identification will continue to prove a challenge. It comes down to having a healthy dose of cynicism and critical awareness. Coming across a sensationalist piece of information should lead to verification on trusted sources and news sites. An added level of literacy will help to better understand the accuracy of information.

Additionally, Mr. Lee shared that if you discover your personal data has been unintentionally leaked and it is a breach of privacy, you will likely have rights under personal data laws. In Singapore, the PDPC (Personal Data Protection Commission) can take a complaint to open an investigation into the issue. At the same time, having a greater understanding of how data is being used is the first step to addressing personal data privacy.

4. Do you think there should be formal AI-focused modules in schools, or are existing resources sufficient for students to learn AI effectively?

Ms. Yue shared how her company, IBM, has been working with Institutes of Higher Learning (IHLs) in Singapore to add some of these relevant causes to the local school curriculum. However, she added that the level of training materials differs greatly. A very different level of AI-focused training is needed amongst the different schools, where skills for IT and infocomm students will vary from those required of business students.

Students concentrating in non-tech fields will need more training on the application of AI, whereas tech-related fields will contain more on courses on coding levels. Schools have begun to teach the fundamentals that Ms. Yue hopes to see translated into life skills, but she believes

that we need more formal modules. A deepening of technological and AI adoption is crucial and organisations like IBM continue to work with schools to achieve this.

5. How do you perceive the current efforts in addressing ethical considerations around data collection and ownership in Generative AI? In your view, are there any gaps or areas that need more attention, and what steps could be taken to improve these efforts?

Mr. Lee highlighted ongoing efforts to regulate GenAI and AI systems, even if there is no horizontal legislation like the EU's AI Act. This means that AI is not allowed to act in a legal vacuum. Existing laws, such as the Personal Data Protection Act (PDPA), still apply to data processed within AI systems. Currently, there has been a lot of work done by the PDPC and Infocomm Media Development Authority (IMDA) in collaboration with industries and civil society, to address challenges related to data protection. Organisational clarity remains crucial towards how developers must design AI systems to comply with regulations systems. Additional guidance from these regulators, therefore, would be worthwhile. Operationalising data laws remains a significant challenge, given the large amount of data that AI systems have access to.

Ms. Yue shared that there is a developing corporate perspective on the ethical use of artificial intelligence solutions, with many companies having an AI governance board to make sure solutions remain ethical. Therefore, companies are doing their part to make sure they are doing whatever they can to guide the ethical use of AI, but it remains crucial to adopt a multi-stakeholder approach that harmonises and aligns regulatory frameworks.

Answered by Mr. Josh Lee, Managing Director (APAC) of the Future Privacy Forum (FPF), Advisor (Technology, Media and Telecommunications) in Rajah & Tann Asia, Adjunct Professor (AI Law, Policy, and Ethics) at SMU Yong Pung How School of Law and Ms. Yue Yean Feng, Head of IBM's Corporate Social Responsibility (CSR) and University Programmes across Greater China, Korea, ASEAN, and Australia/New Zealand. They were the speakers at the "Harnessing the Potential of GenAI in Singapore and ASEAN" webinar held on 31 August 2024.