<u>**NEWS RELEASE**</u>

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NTU Singapore launches Innovation Port to support entrepreneurs and accelerate commercialisation of technologies

To support budding entrepreneurs and speed up the commercialisation of technologies**, Nanyang Technological University, Singapore (NTU Singapore)** has launched the **NTU Innovation Port**.

The new facility will be a collaborative space for the NTU community, innovators, and industry partners to explore business opportunities, discuss challenges, form teams, and build prototypes. Boot camps and training workshops will be held regularly at the Port to foster and launch more NTU spin-offs and start-ups.

Situated at two locations, the Arc and Gaia learning hubs, the Port is also a one-stop-shop for industry partners seeking to engage in research collaborations with NTU or license its technologies.

The launch of the NTU Innovation Port today held at the Arc was witnessed by the **Minister of State, Ministry of Culture, Community and Youth & Ministry of Trade and Industry, Mr Alvin Tan**.

The NTU Innovation Port signals the next wave of momentum for NTU's **Innovation and Entrepreneurship (I&E) initiative**, which launched in March last year and has since guided over 130 researchers and 25 deep tech teams towards commercialising their innovations.

More than $800 million worth of NTU spin-offs

Over the last three years from 2021 to 2023, the University has filed 953 Intellectual Properties (IP), an increase of 70 per cent as compared to the period of 2018 to 2020.

In this same three-year period, NTU had 23 new spin-offs from the IPs and incubated 65 start-ups and teams from the NTU community. The University also helped these early-stage firms raise a combined S$146 million, such as from angel investors and venture capitalists, an increase of 30 per cent from the earlier three years.

Over the last decade, NTU's portfolio spin-off companies have a combined valuation of over $800 million and it is targeted to grow 10 per cent annually.

NTU Vice President (Innovation and Entrepreneurship) Professor Louis Phee, said, "The NTU Innovation Port represents the University's commitment to build a vibrant ecosystem where innovation and entrepreneurship can thrive and succeed. With this new space and our new mentorship programmes, we will arm our community with the required knowledge and skills to transform their disruptive ideas into profitable ventures with real-world impact."

Enhancing entrepreneurship education and venture creation

A key pillar of NTU's education is its undergraduate entrepreneurship programme, which was recently recognised with the prestigious **International Council of Small Business 2024 Entrepreneurship Education Excellence Award**.

Over the years, the programme has trained tens of thousands of undergraduates in entrepreneurial thinking and skills required to develop ideas into tangible prototypes, business plans and student ventures.

Students will now have easy access to technical expertise at NTU's new **Makerspace** located near the Innovation Port, which has a lead technologist that can advise them on the best ways to develop prototypes and manage their projects effectively.

Accelerating impactful start-ups

Among the 21 start-ups and teams showcased today at NTU Innovation Port's launch is **Kookree**, a two-year-old Artificial Intelligence (AI) technology start-up founded by NTU alumnus **Mr Kelvin Kok** with two other co-founders, supported by NTU I&E.

A two-time Infocomm Media Development Authority (IMDA) Open Innovation Platform winner and a recipient of the Enterprise Singapore Startup SG Tech grant, Kookree is demonstrating its latest Generative AI engine for the first time to the public. Their software technology can instantly generate realistic text-to-video scenes comparable to those produced by leading multi-million-dollar AI companies.

Their technology is powered by a proprietary machine learning algorithm that also drives their flagship product, SENSEMAKER. It is an advanced AI solution for intelligent video deep search, enabling users to search for people, objects, and human actions or expressions using natural language text inputs – such as English sentences. Users without any knowledge of coding can also set up real-time detection and alerts from CCTV footage with simple sentences. *(Read more in Annex A)*

SENSEMAKER has completed successful proof-of-concept trials with an airport and users in the defence sector. Currently, it is deployed by several companies, such as those in security, media, storage and logistics.

Another AI technology receiving venture-building support from NTU is **reCOGnAIze**, a clinically designed game aimed at the early detection of brain diseases in high-risk patients suffering from vascular conditions like hypertension and diabetes.

Developed by **NTU Associate Professor Nagaendran Kandiah**, Director of the **Dementia Research Centre** at the **Lee Kong Chian School of Medicine**, the software assists doctors in making informed decisions about early interventions for their patients. *(More details in Annex A)*

I&E Playbook and Tech Portal

To facilitate the commercialisation process for its faculty and researchers, NTU has introduced a new **I&E Playbook**, which provides information on Intellectual Property, spin-off strategies, and other aspects of launching a start-up.

Additionally, these aspiring entrepreneurs will receive dedicated mentorship from Venture Builders, who are former entrepreneurs and industry veterans.

Going live today is also **NTU's new Technology Portal**, a public website showcasing over 150 high-impact technologies such as in AI, nanotechnology and sustainability, now available for licensing by industry.

The NTU Innovation Port is set to become a key platform in NTU's efforts to drive innovation and entrepreneurship. It will provide networking opportunities for students, faculty and alumni, offer resources and mentorship, and foster a vibrant entrepreneurial ecosystem, which in turn supports Singapore's vision to be a global hub for innovation and deep tech enterprises.

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About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 35,000 undergraduate and postgraduate students in the Business, Computing & Data Science, Engineering, Humanities, Arts, & Social Sciences, Medicine, Science, and Graduate colleges.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Earth Observatory of Singapore, Nanyang Environment & Water Research Institute and Energy Research Institute @ NTU (ERI@N).

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

Ranked amongst the world's top universities, the University's main campus is also frequently listed among the world's most beautiful. Known for its sustainability, NTU has achieved 100% Green Mark Platinum certification for all its eligible building projects. Apart from its main campus, NTU also has a medical campus in Novena, Singapore's healthcare district.

For more information, visit www.ntu.edu.sg

Kookree: Innovating with Generative AI and Computer Vision

Company Overview

Kookree is a Singapore-based deep tech start-up committed to leveraging AI to make life simpler, smarter, safer, and more accessible. With a mission to democratise AI for all, Kookree is at the forefront of generative AI and computer vision innovation in Singapore and the region.

Achievements

IMDA Open Innovation Platform Winner: Two awards in 2023 and 2024.

Supported by Enterprise Singapore: Kookree's generative AI development programmes are backed by the Startup SG Tech Grant.

Innovative Technologies

Generative AI: Kookree is among the pioneers in the emerging field of text-to-video and image-to-video generation. The company's proprietary AI model uses sliding window diffusion to create long-form videos in sequence, without the need for additional hardware. It can seamlessly incorporate multiple unrelated prompts, producing cohesive videos with smooth transitions. The start-up is among a select few global players in this innovative technology space, alongside major names like OpenAI SORA, RUNWAY, and PIKA in the U.S., and VIDU and KLING in China. Kookree's advancements are poised to revolutionise the video advertising industry, particularly in creating short video clips for product listings on social media platforms.

SENSEMAKER: This commercially available product offers intelligent video deep search and coding-free (known a no-code) AI video analytics and alert monitoring. SENSEMAKER enables users to search unstructured large video datasets for specific scenes (people, objects, or actions) using simple natural language text inputs – such as English sentences. The AI then quickly and accurately identifies video frames matching the query, transforming how videos are managed, particularly in the security and safety sectors. It is currently deployed in several companies, showcasing its practical application and effectiveness in real-world scenarios.

reCOGnAIze

Background

By 2030, over 150,000 Singaporeans are projected to live with dementia. 10 to 15 per cent of patients with Mild Cognitive Impairment (MCI) or pre-dementia, if left undetected, will progress to dementia which is an irreversible process. To arrest dementia, MCI needs to be detected early as both pharmaceutical and non-pharmaceutical interventions are now available. However, such interventions are successful only at the MCI stage.

Problem

A study in 9 major Asian cities including Singapore, has concluded that people who are obese, suffering from high blood pressure, high cholesterol or Type 2 diabetes, are at higher risk of getting vascular MCI. Due to these vascular conditions, the blood supply to the brain is reduced, leading to cognitive impairment over time.

With the increasing prevalence of Singaporean adults aged 50 years old and above, suffering from such vascular conditions (more than 40% of adults have at least one condition), more people are increasingly at risk of developing vascular MCI. MCI goes highly undetected in the community with only about 20% having sought medical treatment.

It is a challenge to detect vascular MCI because the earliest signs are not related to changes in memory, and it can only be detected by MRI scans. The conventional understanding of dementia is commonly known as Alzheimer's disease. Currently, there is a lack of fast screening methods to detect vascular MCI at the earliest possible stage for early medical intervention. In most cases, when patients sought medical consultation for memory-related problems, MCI might have progressed irreversibly to dementia.

Solution

Since vascular MCI manifests itself differently from Alzheimer's Disease MCI, at the Dementia Research Centre (Singapore), we conduct comparative studies of the cognitive and behavioural differences with neuropsychological assessments, MRI scans and blood biomarkers, of more than 1,000 Singaporeans and developed *ReCOGnAIze*.

reCOGnAIze is a simple and interactive mobile application with 4 clinically designed and validated assessment games, that can be completed within 15 minutes. Designed to detect specific cognitive and behavioural functions of the brain that are directly related to vascular MCI, the built-in artificial intelligence can assess if a patient exhibits early signs.

Impact

In a study of 200 Singaporeans to detect vascular MCI, *reCOGnAIze* has an accuracy of 89 per cent, compared with the gold standard that consists of neuropsychological assessment tests, Magnetic Resonance Imaging (MRI) and blood tests.

The future of *reCOGnAIze* is to be a fully self-administered, personalised digital assessment tool to enable fast screening and detection of vascular MCI, for more than 650,000 at-risk Singaporeans, which is expected to increase annually. The aim is to reduce the growing healthcare cost of dementia that now stands at more than S$600M per year which is expected to increase. *reCOGnAIze* will be made available in multiple languages.