brainhack

DSTA
Defence Science &
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News Release

INSPIRING TOMORROW'S DEFENCE TECHNOLOGISTS AT
DSTA'S LARGEST EXPERENTIAL TECH LEARNING FESTIVAL

More than 4,300 students participated in this year's BrainHack, a dynamic learning festival designed to ignite curiosity and inspire the next generation of defence engineers and technologists. Organised by the Defence Science and Technology Agency (DSTA), the event has grown into a much-anticipated learning platform among the young, with BrainHack 2025 drawing the largest turnout since its inception in 2019.

Recognising the importance of creating opportunities for youths to be exposed to defence technologies, Senior Minister of State for Defence Mr Zaqy Mohamad said, "BrainHack's growth over the years is a reflection of the growing interest among our youth in emerging technologies such as cybersecurity, artificial intelligence, space systems, and robotics… For a small nation like Singapore, these global developments are instructive. We think it is quite obvious what we need to do. We must be vigilant, agile, and forward-thinking. We must similarly invest in developing talent in defence technology. We need bold thinkers and skilled engineers who can harness emerging technologies for national defence."

With the theme, "Transform Tomorrow", the event offered post-secondary to undergraduate students hands-on workshops, competitions, interactive exhibits and inspiring talks from May to June, culminating in a finale on 11 and 12 June. These activities reflect the work that DSTA engineers do to safeguard Singapore — from developing AI to support sense making and decision making, and building unmanned systems and robots, to strengthening cybersecurity across the defence ecosystem.

This year's BrainHack, being a special edition commemorating DSTA's 25th anniversary, featured new and exciting technology showcases, including the debut of a marine robot and a humanoid robot, as well as an immersion zone that allowed students to experience extended reality missions blending virtual reality and mixed reality elements. Participants tackled challenges in emerging domains such as satellite systems and drone programming – building and testing their own miniature satellites and coding a drone light show. Students got to tinker, compete, and explore tech innovations in defence scenarios. These budding youths also had the opportunity to meet role models in STEM fields, including astronaut Dr Sian "Leo" Proctor who shared how innovations for space can help address challenges on Earth.

Ravin Nagpal, a third-time BrainHack participant and Year 2 Cybersecurity student from Ngee Ann Polytechnic shared, "I've always been drawn to tech, but BrainHack has taught me how skills like AI and cybersecurity can be used in real-world defence scenarios. What kept me coming back is how the challenges are designed to reflect realistic operations. It's not just about solving problems, but understanding how your solutions could be applied. The experiences here have really ignited my interest in pursuing a career in defence tech."

Among those inspired by BrainHack to pursue a career in defence tech was Falicia Ong, who participated in BrainHack's Today I Learned: Artificial Intelligence (TIL-AI) in 2022. She shared, "TIL-AI was an eye-opener in showing me the impact of AI in defence and it sparked my passion for this domain. As an Engineer at DSTA now, I harness AI to develop resilient, intelligent C3 systems for unmanned aerial vehicles that support decision-making in complex, fast-evolving scenarios. It's exciting to be able to work on the latest technologies, and it gives me great fulfilment to be able to contribute to Singapore's security."

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About Defence Science and Technology Agency

The Defence Science and Technology Agency (DSTA) is a top-notch technology organisation that drives innovation and delivers state-of-the-art capabilities to make the Singapore Armed Forces a formidable fighting force. Harnessing and exploiting science and technology, our engineers and IT professionals leverage multidisciplinary expertise to equip our soldiers with advanced systems to defend Singapore. DSTA also contributes its technological expertise to support national-level developments. To achieve our mission, DSTA excels in systems engineering, digitalised platforms, cyber, software development and more.

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