



# NUS COMPUTING INDUSTRY NEWSLETTER

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## From Nagoya into the New Year: SoC's season of connections

In December, SoC students bridged the gap between classroom theory and global industry during the Winter Exchange at Nagoya University. This immersive journey through Japan blended high-level academic engagement with deep cultural discovery.

### Highlights

#### Academic Rigor

Students sharpened their technical edge with presentations in Robotics, AI, and Informatics, complemented by exclusive lab visits.

#### Cultural Fluency

Beyond the tech, participants mastered "Survival Japanese" and explored Intercultural Understanding.



#### Industry & Tradition

The cohort gained rare insights into Japanese innovation at the Toyota Commemorative Museum and the Advanced Research and Innovation Center, balanced by a scenic field trip to the historic Shirakawa Village.

#### Collaborative Problem-Solving

The programme culminated in an intensive systems design and problem-based learning session with Nagoya University students.



Wishing everyone a happy and successful New Year. We look forward to deepening our partnerships and reaching new milestones together in the year ahead!

# Taichung City Government Delegation Visits NUS School of Computing



On 16 December, the NUS School of Computing hosted a delegation from the Taichung City Government Digital Affairs Bureau, Taiwan, as part of an official exchange visit to Singapore. The visit provided an opportunity for in-depth knowledge exchange on emerging topics in data governance, data security, and artificial intelligence. Discussions covered data protection frameworks, privacy-enhancing technologies, and technical considerations surrounding the governance and risk management of Generative AI.

The exchange also highlighted potential areas for collaboration in data governance, AI safety, and smart city innovation, reflecting the School's continued engagement with international government partners at the intersection of computing, policy, and technology.

## Coming Up Soon: NUS School of Computing Career Fair!



Drop by the NUS Computing Career Fair to connect with top employers, explore internship and full-time opportunities, and learn more about potential career paths in different industries.

### Resume Clinics

To help students prepare for meeting prospective employers, CFG will be running resume clinics on 21 & 22 January, from 12-5pm at COM3 Terrace Canteen (Pods 3 & 4). Students can have their resumes reviewed and be better prepared ahead of the event.

THANK YOU FOR JOINING US AT THE NUS COMPUTING

# AI-X: INDUSTRY DAY

In partnership with IMDA's Technical Sharing Session



**AI-X: INDUSTRY DAY** on 18 November 2025 brought together faculty members, researchers, and industry leaders for a day of insightful sharing, lively discussion, and hands-on exploration of cutting-edge AI projects. Speakers showcased real-world applications across domains, while demos and posters showcased research with real-world applications.

Thanks to our speakers, partners, and more than 200 attendees for the thoughtful questions and valuable exchanges that made the event a success!

# RESEARCH SPOTLIGHT

## Bullying an AI: Personality Prompts and Hidden Vulnerabilities

In the rapidly advancing world of artificial intelligence, a study led by Professor Mohan Kankanhalli explored **how AI models respond to bullying**. Experiments were designed where one AI model, acting as an attacker, used **psychological manipulation tactics** to pressure another AI, the "victim," into generating unsafe content, such as instructions for harmful or illegal activities.

They used the well-known "Big Five" personality model (often abbreviated as OCEAN): Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism to see how those simulated personalities affect the **model's vulnerability to manipulative, adversarial language**.

Once the AI personas were set, the researchers introduced another LLM to the role of a bully. Its job was to pressure the "victim" model into producing unsafe responses using a wide range of psychological tactics. As AI systems become more integrated into everyday life, from virtual assistants to customer service bots to educational tutors, the ability to simulate personality will only become more common. That makes it all the more **important to understand how those personas affect both performance and vulnerability**. For those working on AI safety, this research shows that:

- Prompted personas significantly influence how models behave under adversarial pressure.
- Some manipulation tactics are harder to detect than others and may slip past existing filters.
- Prolonged conversations can wear down safety mechanisms, even without using clearly toxic language.

In practical terms, that means developers need to rethink how they design safeguards. It's not enough to check for bad words or obvious jailbreaks. We need systems that **understand intent** and can **withstand subtler forms of social pressure**.

**Read more here:** <https://www.comp.nus.edu.sg/features/bullying-the-machine/>



**Featured Faculty**  
**Mohan Kankanhalli**  
Provost's Chair Professor

## AudioCast: Ultra-Low-Power, Long-Range Wireless via the FM Radio Band



**Featured Faculty**  
**Ambuj Varshney**  
Assistant Professor

In our increasingly connected world, wireless connectivity challenges hinder the deployment of embedded systems. **AudioCast**, developed by Assistant Professor Ambuj Varshney and his team at the WEISER (Wireless, Embedded Intelligence, Sensing, and Emerging Technologies) group introduces a new class of audio-broadcasting low-power tags that operate outside conventional radio spectrum, by **leveraging the FM radio spectrum**. This addresses two critical issues: **spectrum scarcity-induced contention** and **high power consumption in transmitters**.

AudioCast rethinks the architecture of radio transmitters using a **tunnel diode oscillator** to generate carrier signals and self-modulate them with baseband signals. This results in frequency-modulated transmissions at an overall power consumption below 200 microwatts. Unlike related systems based on the backscatter mechanism, AudioCast does not require an externally generated carrier or rely on ambient signals.

The low power, long range, and compatibility with existing receivers make AudioCast a flexible platform for real-world deployment. Instead of pushing for higher data rates or tighter integration with existing radio stacks, AudioCast looks sideways – finding value in **forgotten spectrum, simple analog modulation, and radical power efficiency**. It suggests a world where **infrastructure-light, battery-friendly, and human-compatible devices** can coexist with minimal environmental and operational cost.

**Read more here:**

<https://www.comp.nus.edu.sg/features/reimagining-connectivity-how-audiocast-delivers-ultra-low-power-wireless-communication-at-scale/>



# Capstone Projects Proposal Schedule

## Master of Computing - General Track

This capstone internship provides an opportunity for students to work on solving problems beyond the formal classroom setting.



Structure	4 months individual internship with a company
Company Submission Period	Nov 2025 - Mar 2026
Internship Period	Mid-May 2026 - Mid-Sep 2026
Contact	<a href="mailto:soc-capstone@nus.edu.sg">soc-capstone@nus.edu.sg</a>

## Master of Science in Digital Financial Technology (MSc DFinTech)

The MSc DFinTech Capstone internship requires students to have experiential learning in academic research, translational research or software development.



Structure	4-6 months individual internship with a company
Company Submission Period	Nov 2025 - Mar 2026
Internship Period	Mid-May 2026 - Mid-Oct/Nov 2026
Contact	<a href="mailto:soc-capstone@nus.edu.sg">soc-capstone@nus.edu.sg</a>

## Master of Science in Business Analytics (MSBA)

The industry-linked professional consulting capstone project requires students to analyse and provide solutions to today's real-world business analytics problems.



Structure	4 months individual internship with a company
Company Submission Period	Jan 2026 - Apr 2026
Project Period	May 2026 - Aug 2026
Contact	<a href="mailto:MSBA@nus.edu.sg">MSBA@nus.edu.sg</a>

## Business Analytics (Undergraduate)

Students are expected to solve a real-world business analytics project proposed by a company which could include (but not limited to): data analytics, machine learning, design and development of interactive and performance dashboard, and data mining.



Structure	3 months group project with a company. Work to be done in NUS	
Company Submission Period	Jun 2026 - Jul 2026	Nov 2026 - Dec 2026
Project Period	Aug 2026 - Nov 2026	Jan 2027 - April 2027
Contact	<a href="mailto:dispsaa@nus.edu.sg">dispsaa@nus.edu.sg</a>	

## Business Artificial Intelligence Systems (Undergraduate)

Students are required to develop a complete AI solution incorporating elements of data engineering, machine learning modelling, and software engineering to address a real-world problem. They will apply modern best practices, such as Agile methodology, DataOps, and MLOps, throughout the solutioning process.



Structure	3 months group project developing business AI system for company. Work to be done in NUS.	
Company Submission Period	Jun 2026 - Jul 2026	Nov 2026 - Dec 2026
Project Period	Aug 2026 - Nov 2026	Jan 2027 - April 2027
Contact	<a href="mailto:hsianghui@nus.edu.sg">hsianghui@nus.edu.sg</a>	<a href="mailto:wee-kek.tan@nus.edu.sg">wee-kek.tan@nus.edu.sg</a>

# NEW YEAR. NEW SKILLS.

Gain in-demand skills for the year ahead!

Funding options available. Terms and conditions apply.



Apply Now

**Intelligent Transformation of Businesses**  
Starts 22 Jan 2026 (Thurs)  
Duration: 2 Days

**Ethical Hacking and System Hardening**  
Starts 3 Feb 2026 (Tues)  
Duration: 3 Days

**Communicating Insights with Data Storytelling**  
Starts 23 Feb 2026 (Mon)  
Duration: 3 Days

**Introduction to Cybersecurity**  
Starts 27 Jan 2026 (Tues)  
Duration: 3 Days

**Role of Ethics in Artificial Intelligence**  
Starts 9 Feb 2026 (Mon)  
Duration: 2 Days

**Data Engineering Fundamentals**  
Starts 23 Apr 2026 (Thurs)  
Duration: 2 Days

Looking to level up your team with AI & Tech skills?  
Contact us to customise a learning journey  
for your team from our catalogue of over 200+ courses.  
Enquire at [socx@nus.edu.sg](mailto:socx@nus.edu.sg) today!

Follow us on social media



## NUS Computing Executive Education Masterclass Series

### Unlock the Truth Behind Modern Security

Discover why **privacy**, **performance** and **presentation** attacks matter in biometrics. Gain practical insights to protect trust and security in a connected world.

22 Jan 2026 (Thurs)

National University of Singapore (NUS)  
Innovation 4.0 Building, Seminar Room I4-01-03  
3 Research Link, Singapore 117602

Registration starts from 3:45pm  
Masterclass + Q&A from 4pm - 6pm

Limited Seats, Register Now!

### Speakers



Assoc Prof Terence Sim  
NUS Computing



Ms Liz Chua  
Innovation Lead  
Group Technology Office  
Boustead Projects



# Partner with Us

Join our exclusive industry programmes to connect with students and explore cutting-edge research collaboration.



## 02 Research Membership

### Knowledge Sessions

Invitations to exclusive talks on emerging themes in technology, keeping your organisation informed and ahead.

### Technical Workshops

Upskill your team: access to customised technical workshops designed and delivered by our experts.

### Co-Hosted Workshops

Opportunities to collaborate with SoC on tailored half-day workshops, exchanging research ideas and partnership possibilities.



## 01 iConnect Membership

### Priority Access

Have priority arrangements at NUS School of Computing career fairs.

### Student Outreach

Reach out to computing students through various media (e.g interactive TVs placed at strategic locations in the school, online platforms and social media).

### Seminars

Share insights and career opportunities through seminars at NUS School of Computing.

 **iConnect**  
SoC Industry Relations



iConnect



Research

**Find Out More**