



Sailing into the Future: Roti Proa and the Push for Carbon- Neutral Water Transport

A team of NUS students led by Associate Professor Martin Henz is pushing boundaries in green tech with **Project Roti Proa**—a hybrid wind- and solar-powered smart boat inspired by traditional Polynesian proas. Funded by the Maybank Green Fund, this 4.2m prototype explores electric propulsion as a pathway to carbon-neutral water transport across Southeast Asia.

Inspired by traditional proas, the boat can reverse direction to maximise solar energy collection. Real-time data from onboard sensors and online sources also help predict speed, endurance, and energy use—supporting smarter planning for future electric vessels.

“*The key to his success was pragmatism, resilience, and a breadth of engineering skills.*”

The embedded systems were built using Arduino (C) and Raspberry Pi (Python), chosen for their affordability, community support, and ease of use—making them ideal for replication in small commercial vessels.

As a Master of Computing capstone project to conclude his Concurrent Degree Program with NUS and ENSTA Paris, Loick Antoine Le Goff is pursuing the project “Power Management for Roti Proa”. The leadership of the Roti Proa building team comprises six undergraduate students: Soo Yan Jia and Wu Ningjing (FASS), Hannah Westerhout Hasan and Lui Ting Mun Sharlyn (College of Design & Engineering), and Muhammad Syam Farhan bin Agus Rizal and Teo Shao Wei Nigel (School of Computing).

What's Next?

The team hopes to scale the project by developing low-cost, carbon-neutral boat designs for coastal communities in Indonesia, Malaysia, and Singapore. Their focus will be on low-cost carbon-neutral boat designs, standardized modular embedded systems and software solutions that let boat operators without IT background tap into data sources on-demand.

Interested in Roti Proa's journey? Join their Telegram group [here](#) to follow the development and get the latest updates.

Ever Wondered What It's Like to Work at HDB?

Finding a purpose beyond self



Working on the HDB Sales System, **I can see how my expertise in software engineering directly impacts the lives of Singaporeans seeking homes.**

This system, which facilitates access to various public housing options, plays a crucial role in one of the most significant decisions in people's lives - finding a place to call home.

Enhanced HDB Sales System for the public to apply for new flats



Chen Xuanyi (HDB)
Application Engineer

I am part of a major project to transform the Sales System into a cloud-native web application. We have modernised the public-facing website for flat applications and revamped back-office operations to ensure accurate data capture during sales launches. My role involves assessing the system and identifying possible changes to meet the project's objectives effectively.



Join us at our Pre-Application Dinner and Tech Talk!

You will have the opportunity to meet with Jane Streeters, to learn about our Software Engineer's day-to-day responsibilities, a bit about our tech stack at Jane Street, what it is like to be a Software Engineer in a global quantitative trading firm, and career prospects at Jane Street.

Who:

Students graduating in 2027 and 2028

When:

Tuesday, 13 May, 2025

6:00-8:00pm SGT

Where:

Singapore Central Business District
(Venue details will be shared with selected attendees)



[Sign up here](#) by Thursday, 8 May if you're interested! We will confirm attendees by EOD on Friday, 9 May.

If you have any questions, please reach out to anz-connect@janestreet.com

Jane Street is a global trading firm with offices in New York, London, Hong Kong, Singapore, and Amsterdam. Our approach is rooted in technology and rigorous quantitative analysis, but our success is driven by our people.



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Worth \$5k
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- Logo on website (hyperlink to sponsor's company) and dinner backdrop (Top Line)
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- Acknowledgement on SoC social media (FB & IG)

Silver (\$10K)

- Anniversary Dinner (4 Seats)
- Monthly Publicity in SoC newsletter until Aug 2025
- Logo on website (hyperlink to sponsor's company) and dinner backdrop (Regular)
- Mention of sponsor at dinner
- Acknowledgement on SoC social media (FB & IG)

In-Kind (\$1K<\$<\$<\$10K)

- Mention of sponsor at dinner
- Acknowledgement on SoC social media (FB & IG)

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.

4 months individual internship with a company

Company submission period: Nov 2024 - Mar 2025

Internship period: **Mid-May - Mid-Sep 2025**

Contact: gt-capst@comp.nus.edu.sg

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.

4-6 months individual internship with a company

Company submission period: Nov 2024 - Mar 2025

Internship period: **Mid May to Mid-Oct/Nov 2025**

Contact: msc-dft-capstone@comp.nus.edu.sg

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.

4 months individual project with a company

Company submission period: Jan - Apr 2025

Project period: **May - Aug 2025**

Contact: MSBA@nus.edu.sg

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.

3 months group project with a company. Work to be done in NUS

Company submission period: Jun - Jul 2025
Nov - Dec 2025

Project period: Aug - Nov 2025
Jan - April 2025

Contact: shalinda@comp.nus.edu.sg

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.

3 months group project developing business AI system for company. Work to be done in NUS.

Company submission period: Jun - Jul 2025
Nov - Dec 2025

Project period: Aug - Nov 2025
Jan - April 2025

Contact: tanwk@comp.nus.edu.sg (Aug-Nov term); hsianghui@nus.edu.sg (Jan-April term)

Connect with Us

Joining the iConnect membership allows industry partners to:



01 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).



02 Seminars

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

03 Priority Access

Have priority arrangements at NUS School of Computing career fairs.

iConnect
SoC Industry Relations



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