

Brian Soh Han Yu

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EDUCATION

Nanyang Technological University, Singapore

Aug 2022 - Dec 2025

Bachelor of Engineering in Computer Engineering

- Elective Focus in Security (Coursework: Computer Security, Malware Analysis and Cyber Threat Intelligence)

Singapore Polytechnic, Singapore

Apr 2017 - Apr 2020

Diploma in Computer Engineering

- Specialize in Computer Applications

EXPERIENCE

Singtel, iLab

Jan 2026 - Current

Digital Engineer (Network Lab & Test Process)

- Led end-to-end test management system modernization by coordinating vendor delivery, migrating **600+** test cases by reverse engineering legacy databases, integrating automated tests, and documenting **100+** manual workflows.
- Automated mobile Wi-Fi speed tests within an RF / EMC anechoic test chamber by programming an Arduino Uno R4 in **C** to simulate touch inputs (HID mouse emulation), reducing manual labour by **95%** and cutting test time by **50%**.
- Built an air-gapped web-to-CLI relay system on an **Odroid C2** with **JavaScript** to automate generation and execution of **SSH/Telnet** commands across **10+** GPON OLTs over an isolated network, accelerating provisioning speed by **3x**.

NCS Singapore

Jul 2024 - Dec 2024

Software Engineering/Quality Assurance, Intern

- Executed end-to-end testing across the entire software development lifecycle, developed **200+** test cases, uncovered **100+** software bugs and complex edge cases while collaborating with developers to drive rapid resolution of defects.
- Documented testing procedures, analysed client requirements, and produced detailed technical documentation and Software Requirements Specifications (**SRS**) reports across **10+** projects to streamline and support development.

NCS Singapore

Mar 2019 - Aug 2019

Software Engineer, SHINE Intern

- Automated the password expiration notification process for **1,000+ domain users** using **PowerShell** and **Batch** Scripting, delivering the end-to-end solution ahead of schedule in **under two weeks** in partnership with management.
- Developed an asset inventory management desktop application in **.NET**, **C#** and **PostgreSQL** to track **500+** hardware assets across **5+** locations and generate reports, cutting document generation and inventory tracking time by **80%**.

PROJECTS

Nanyang Technological University, Singapore

Jan 2025 - Dec 2025

Final Year Project – Augmented Reality Headset

- Engineered a real-time web-AR architecture, cross-compiling a modified **C++** tracking and optimization system (**Ceres**, **Sophus**) to **WebAssembly** and integrating it with **JavaScript** to run in browsers on resource-constrained systems.
- Developed a visual localization system based on **OV2SLAM** and **ORB-SLAM2** in **C++**, incorporating web workers and low-latency optimizations to achieve **<50ms** frame processing times for responsive and real-time AR experiences.
- Prototyped a wearable edge-enabled mobile AR headset, streaming stereo camera frames from an edge device (**Jetson Xavier NX**, **Linux**) over **ROS2** and WebSockets to browser clients rendering AR graphics at **>15 FPS**.

ACHIEVEMENTS

NTU HPC (High Performance Computing)

Dec 2023 - Dec 2024

Student HPC Engineer / Competition Team Member

- Achieved **2nd Place globally** representing NTU's High-Performance Computing team at **HPC-AI 2024**, optimizing **MPI** inter-node communication, profiling software stacks, and scaling **HOOMD-blue** across **1,500+** CPU cores.

Singtel SHINE Engineering Cadet Programme Scholarship (Singapore Polytechnic)

Mar 2018 - Apr 2020

- Awarded full tuition coverage, monthly stipend, a guaranteed internship and a **1-year** full-time bond at Singtel/NCS.

TECHNICAL SKILLS

Languages: C, C++, C#, Java, JavaScript, Python, HTML/CSS, PostgreSQL

Shells & Scripting: PowerShell, Bash, Batch

Frameworks: Node.js, Express.js, React

Developer Tools: Git, GitHub Actions, VS Code