

Tan Hiok Kuek

Computer Science Student

[Mail](#) | [Linkedin](#) | [Github](#)

EDUCATION

National University of Singapore

Aug 2024 - May 2027

Bachelor of Computing in Computer Science (Cumulative GPA 4.64)

WORK EXPERIENCE

Software Engineering Intern – NUS-NCS Cybersecurity Lab

Aug 2024 – Aug 2025

- Architected **high-concurrency phishing detection API** serving **10,000+ users**, implementing auto-scaling infrastructure and security protocols.
- Deployed **scalable cloud system** with CloudWatch monitoring and load balancing, achieving **40% cost reduction** through resource optimization.
- Migrated AWS infrastructure to **Terraform IaC**, improving deployment reliability and enabling infrastructure versioning.
- Co-authored [PhishIntel](#) research paper accepted at **WWW 2025**, contributing novel cybersecurity detection methodologies.
- Fine-tuned [DistilBERT classifier](#) achieving **94%+ accuracy** on contemporary phishing datasets with advanced preprocessing.
- Built cross-platform **on-premise application** with **LlamaCPP** integration, supporting **CPU/CUDA GPU** acceleration and PyInstaller packaging.
- Engineered **multi-agent detection pipeline** combining ML classifiers and LLM analysis, achieving **sub-2-second** end-to-end processing.

Frontend Developer Intern – Singapore Press Holdings

Nov 2023 – Feb 2024

- Contributed to the platform team during a major migration towards modern web technologies such as **React** and **AWS**.
- Developed responsive landing pages using **React** from UI/UX wireframes, deployed across **40+ publications**.
- Implemented unit tests with **Jest** and **React Testing Library**, improving code quality and reliability.
- Developed admin dashboard using **Backstage**, enabling users to submit issues and track progress.

PROJECT EXPERIENCE

Tanbucha – E-commerce Platform

May 2025

[tanbucha.com](#)

- Built responsive e-commerce platform with **Next.js** and **TypeScript**, implementing mobile-first design patterns.
- Integrated **Stripe API** for payment processing and **EmailJS** for automated customer notifications.
- Achieved **50+ organic visitors** and **100+ sales** through SEO optimization and performance tuning.

Home Server Infrastructure – DevOps & Self-Hosting

Dec 2024

- Deployed **home server infrastructure** using **OpenMediaVault**, converting legacy hardware into network-attached storage.
- Configured **SMB protocols** and **Cloudflare Tunnels** for secure remote access and cross-device file synchronization.
- Containerized applications using **Docker** with automated deployment pipelines and infrastructure-as-code principles.

AWARDS

NUS Hackers Hack&Roll (1st)

SplashAwards 2023 (1st)

SUTD WhatTheHacks 2023 (1st)

CloudHacks 2023 (1st)

GroundZero 2024 (Finals)

NUS CHS Case Comp (Finals)

COURSES

CS1101S: Programing Methodology

CS1231S: Discrete Structures

CS2100: Computer Organisation

CS2030S: Programing Methodology II

CS2040S: Data Structures and Algorithms

CS2103T: Software Engineering

SKILLS & INTERESTS

Languages & Frameworks: Python · Java · TypeScript · HTML · pandas · NumPy · PyTorch · Flask · React

APIs & Tools: Docker · Git · Hugging Face

Certifications: [AWS Certified Solutions Architect - Associate \(SAA-C03\)](#)

Interests: Applied AI · Machine Learning · Performance Optimisation · Full-Stack Development