# 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

- Independently designed **architecture** of a phishing detection API adopted by **10,000 users**, focusing on **high concurrency** and **security**.
- Implemented a **scalable system** using **cloudwatch metrics** and **load balancer**, reduced cost by **40%**.
- Migrated above-mentioned AWS infrastructure to **Terraform** to ensure code maintainability.
- Efforts above contributed to the publication of [PhishIntel](#), accepted at the **World Wide Web Conference 2025**.
- Fine-tuned [distilBERT classifier](#) to more accurately detect phishing emails using recent datasets.
- Built a native, **on-premise** application that detects phishing emails using the classifier above and explained using local LLM through **llamacpp**, bundled with **PyInstaller** to support both **CPU** and **CUDA GPU** backend.
- Developed an **agentic pipeline** to improve **email phishing detection** using **weighted feedback** from email attributes, classifier, LIME explanations and LLM insight with an end-to-end time of **2 seconds**.

**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** – *Next.js*                                                                                                    May 2025
*https://tanbucha.com*

- Designed UI/UX and developed a responsive, interactive web application with TypeScript and Next.js
- Integrated with StripeAPI for secure payment processing and Emailjs for email notifications after successful purchases.
- Managed SEO to achieve over 50+ organic visitors in the first few months of launch, selling over **100 bottles.**

**Home Server** – *OpenMediaVault*                                                                             Dec 2024

- Repurposed an old laptop into a Home Server with OpenMediaVault.
- Configured file sharing with SMB for seamless access across devices.
- Configured cloudflare tunnels to remotely access dockerised applications.

## 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

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|---|---|
| **CS1101S**: Programing Methodology | **CS2030S**: Programing Methodology II |
| **CS1231S**: Discrete Structures | **CS2040S**: Data Structures and Algorithms |
| **CS2100**: Computer Organisation | **CS2103T**: Software Engineering |
| **CS3210**: Parallel Computing (Planning to take) | **CS2109S**: Intro to AI & ML (Planning to take) |

## SKILLS & INTERESTS

**Languages & Frameworks**: Python · Java · pandas · NumPy· PyTorch · Flask

**APIs & Tools**: Docker · Git · Hugging Face

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

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