Tan Hiok Kuek

Singaporean Software Engineer (Full Stack)

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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 – Present

- Designed and deployed a scalable **URL Phishing Detection API** on **AWS**, utilizing **EC2**, **Auto Scaling Groups**, **Application Load Balancer**, and **Route 53**; adopted by over **10,000 users**.
- Co-authored a research paper on phishing detection, accepted at the **World Wide Web Conference 2025**.
- Migrated AWS infrastructure to **Terraform**, enhancing code maintainability and reducing deployment time by **30%**.
- Developed interactive web applications with **Next.js** for algorithm visualization, leveraging **Redux**, **Tailwind CSS**, **ShadCN**, **GraphViz**, and **D3.js**.
- Built a browser extension using **Plasmo** that functions as an email client, implementing **OAuth2 authentication** and integrating with the **Outlook API**.
- Fine-tuned a **DistilBERT classifier** for phishing email detection using the **Hugging Face Transformers** library, achieving high accuracy on real-world datasets.
- Bundled the classifier and a local **LLM (via llama.cpp)** using **PyInstaller** as a native host within the browser extension, enabling on-device detection and analysis of phishing emails.

Frontend Engineer 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 and Network Attached Storage because I refuse to pay for cloud storage.
- Utilized compute power to host dockerised applications and exposed through port forwarding.

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 (A)	**CS2030S**: Programing Methodology II (A)
CS1231S: Discrete Structures (A-)	**CS2040S**: Data Structures and Algorithms (A-)

SKILLS & INTERESTS

Development Tools: **AWS (Certified Solution Architect)** · **Terraform** · **React** · **Next.js** · **Plasmo** · **Spring Boot** · **Docker**

Languages: **TypeScript** · **JavaScript** · **HTML5** · **CSS** · **Java** · **Python** · **SQL**