

Tan Hiok Kuek

Singaporean Software Engineer (Full Stack)

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EDUCATION

National University of Singapore

Aug 2024 - Jun 2028 (expected)

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 Plasmio 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 100+ organic visitors in the first month 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 · Plasmio · Spring Boot · Docker

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