

Daniel TAY Jin Hong

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EDUCATION

Nanyang Technological University, Singapore Aug 2021 – May 2025 (Expected)
Bachelor of Engineering (Computer Science)

- Reinforced and honed foundational knowledge of 100% computing concepts gained during junior college studies
- Expected Honours (Highest Distinction)
- Relevant Modules: Object-oriented Programming, Data Structures and Algorithms, Advanced Software Engineering, Cyber Security, Cyber Threat Intelligence

INTERNSHIP EXPERIENCE

SAP Asia Pte Ltd Jan 2024 – Jul 2024

Full Stack Development Intern (AI Business Services – Personalized Recommendations Team)

- Increased code quality by reducing 700+ code smells through enhanced code coverage, refactoring high cognitive complexity code, and comprehensive documentation
- Sped up unit tests by 60% through parallel testing and Jenkins scripting, reducing time-to-release for internal PoBs
- Upgraded, updated, and presented Netflix-esque demo for internal and external stakeholders, remodelling legacy code while maintaining backwards compatibility
- Implemented application security enhancements that reduced CVE vulnerabilities, including deploying a rate limiter to prevent DDoS attacks
- Extended and benchmarked application object store integration commons with AWS S3, Azure Blob Storage, GCP Cloud Storage

Central Provident Fund Board (CPF Board) May 2023 – Aug 2023

Software Development Intern (Business Incubator and Accelerator Department)

- Contributed actively to projects in an Agile environment, benefiting from guidance and mentorship from two seasoned software architecture professionals
- Spearheaded an end-to-end CI/CD in-house OAS Validator web application as part of a \$15000 project, using JQuery, ExpressJS, Flask and Docker on Azure DevOps with 90+% code and branch coverage
- Assisted the refactoring of an ASP.NET internal site to a CMS portal using NextJS and Strapi CMS, decreasing manhours needed to edit content by 80%

ACADEMIC PROJECTS

Nanyang Technological University, Singapore

Software Engineering Project Feb 2023 – May 2023

Point-to-point Map Tracking and Routing Web Application

- Developing a single page web application to enable users, especially drivers, to find directions to nearest toilet from nearest carpark or current position
- Leading a team with 4 other undergraduates in developing a full-stack application using React-TypeScript for front-end, NodeJS-ExpressJS-Django for back-end, and PostgreSQL for database management
- Adopted an Agile development methodology, fostering collaboration and flexible planning to deliver high-quality software frequently and efficiently

Object-oriented Programming Project Sep 2022 – Nov 2022

Movie Booking and Listing Management Application

- Cooperated with 4 other undergraduates to implement a Java console-based application to simulate administrator and user movie booking system
- Responsible for account-related logic; gained experience in automated testing and account security
- Prepared and maintained relevant documentation throughout application development lifecycle

Data Science and Artificial Intelligence Project Feb 2022 – Apr 2022

Customer Preference Analysis

- Led a team with 2 other undergraduates to design an end-to-end data science project predicting main factors restaurants in Bangalore, India, should be concerned with to attract returning customers.
- Explored customer purchase data from Kaggle to accurately analyse factors affecting customer feedback and decision-making using Python Jupyter Notebook, Natural Language Processing techniques using NLTK and SkLearn, and Machine Learning classification models such as KNNeighbours and RandomForest

- Experienced in using Google Maps API for Geographical Analysis and XGBoost API for Classification

PERSONAL PROJECTS

SAP Global Gen AI Hackathon 2024

Jul 2024 – Jul 2024

- Achieved top 88/721 teams globally
- Prompt-based Interviewer tool with generative AI (GPT4o) and Joule AI integration to provide tailored interview questions and answers based on Curriculum Vitae (CV) and Job Description (JD) of the candidate
- Designed and modelled with NextJS, SAP UI5 SDK and Typescript within 1 week
- Monorepo architecture using Flask and Axios; deployed using AWS ECS

ESCENDO Hackathon Finalist – Web application tracking RFID tags for luggage tagging

Dec 2022 – Jan 2023

- Cooperated in a multi-disciplinary group with 5 other undergraduates, reaching top 12 in the hackathon
- Responsible for developing React front-end in a full-stack application to simulate luggage registering and tracking during transit between airports
- Assembled RFID scanner using ESP-32 CAM to scan RFID cards and tags within 3 seconds

CO-CURRICULAR ACTIVITIES

International CTF Team - NestingDoll

Aug 2022 – Present

Member

- Participated in CTFs locally and globally with a diverse group of 55
- Ranked 22nd in USA as of 2022

Jurong JC Mathematics and Computing Club

Jun 2017 – Jun 2018

Team Leader

- Spearheaded learning sessions on Python for teams of 10-20 H3 Math students
- Collaborated with teachers and classmates on computing projects simulating historical cryptographic tools and advanced math topics outside of school syllabus
- Oversaw publicity efforts and developed outreach strategies to deliver consistent messages across various platforms reaching a breakthrough 150% increase in new club members

CERTIFICATIONS

- CompTIA Security+
- AWS Certified Cloud Practitioner
- AWS Solutions Architect Associate

SKILLS

Languages: English, Chinese, Japanese (Elementary)

Programming Languages: Python, C, C++, Java, JavaScript, TypeScript,

Frameworks: HTML5, CSS3, SAP UI5, JQuery, AJAX, Axios, ReactJS, Node.js, ExpressJS, NextJS, Flask, Django

Testing Frameworks: Jest, PyTest, Selenium

Operating Systems: Windows, MacOS, Linux (Ubuntu, Kali)

Database Management Systems: MongoDB, MySQL, SQLite, PostgreSQL

Cloud Services: Azure, AWS

Other Tools: Git, GitHub, Wireshark, Burpsuite, VMWare, OracleVM, Postman, Tableau, PowerBI, Docker, SharePoint, Jira, Grafana

HOBBIES & INTERESTS

Programming, Travelling, Badminton

Participated in GovTech Stack The Flags, SUTD What the Hack, NTU-IEP 2022 Finalist, NTU Deep Learning Week Hackathon, NTU Escendo Hackathon Finalist, Meta Upskill 2022, GCC Credit Suisse, Shopee Code League

REFERENCES

Eunice Boh

Principal Consultant @ CPF Board

Singapore Computer Society Executive Committee VP, Enterprise Architecture Chapter

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