**Daniel TAY Jin Hong**

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**Professional Internship (Credit Bearing) Period: Dec 2023 – Aug 2024**

**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) CGPA: 4.48/5.00
* Relevant Modules: Object-oriented Programming, Data Structures and Algorithms, Software Engineering, Cyber Security, Cyber Threat Intelligence

**INTERNSHIP EXPERIENCE**

**Central Provident Fund Board (CPFB)** 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 CICD 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%

**WORK EXPERIENCE**

**Sunningdale Tech Ltd, Singapore** May 2022 – Aug 2022

Apr 2021 – Jul 2021

**Production Operator (Low Tech)**

* Responsible for continuous operation of complex equipment, machinery, and industrial control systems for production equipment and packaging equipment
* Provided in-time ICS operating system (Linux-based) feedback to production technicians and engineers within 10 minutes
* Identified critical control point defects affecting line production in a fast-paced environment
* Assisted line managers in leading 5-10 newcomers each week to get accustomed to production at respective workstations

**ACADEMIC PROJECTS**

**Nanyang Technological University, Singapore**

**Software Engineering Project**  Feb 2023 – Present

**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**

**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

**Jurong JC Environmental Conservation Club**  Jun 2017 – Aug 2018

**Member**

* Planned awareness booths, posters, and presentations for whole school to promote SDG goals on “Clean Water and Sanitation” and “Responsible Consumption and Production”
* Volunteered on Beach Clean-up Days, planting trees on school campus, World Water Day ambassador @ MBS, and did volunteer work at neighbourhood Community Clubs

**CERTIFICATIONS**

* CompTIA Security+
* AWS Certified Cloud Practitioner
* MongoDB Developer Certified

**SKILLS**

Languages: English, Chinese, Japanese (Elementary)

Programming Languages: Python, C, C++, Java, JavaScript, TypeScript, HTML5, CSS3

Frameworks: JQuery, AJAX, ReactJS, Node.js, ExpressJS, Flask, Django

Testing Frameworks: Jest, PyTest, Selenium

Operating Systems: Windows, Linux (Ubuntu)

Database Management Systems: MongoDB, MySQL, SQLite, PostgreSQL

Cloud Services: Azure, AWS

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

**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