Dempster Tay

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EDUCATION

National University of Singapore (NUS)   Aug 2021 – May 2025
Bachelor of Computing in Information Systems

- **Grade Point Average:** 4.36 / 5.00 (Upper Second Class Honours)
- **Coursework:** Object-Oriented Programming, Functional Programming, Data Management and Visualisation, Enterprise Systems Server Architecture & Interface Design and Development, Data Structures and Algorithms

EXPERIENCE

SISTIC Singapore   Mar 2023 – Dec 2023
Software Engineer Intern

- Facilitated revamp of SISTIC portal, utilising **React**, **Sass** and **MUI** to implement new features such as an events visit planner, driving up site traffic by 35% quarter over quarter to **4+ million monthly page visits**
- Refactored backend modules and optimised **SQL** queries for ticketing system using **Spring Boot** and Maven, reducing **API response times by 20%**, with **CI/CD** pipelines automated via **Jenkins**
- Designed and developed an event pricing visualisation tool leveraging REST APIs with **React** and **Express.js**, streamlining the Business Development team's pricing analysis by 60%
- Undertook Scrum Master duties, creating **20+ Jira issues** and aiding sprint planning within an **Agile** framework

Webacy   May 2024 – Jul 2024
Data Analyst Intern

- Leveraged unsupervised Machine Learning with **Python**, **TensorFlow** and **Scikit-learn** to analyse smart contracts across 31 features, identifying 4 key risk clusters that led to a reduction in potential security breaches
- Designed and optimised **SQL** queries, integrating them into **Tableau** dashboards to automate reporting workflows, **saving 10+ hours weekly** and enhancing data-driven decisions
- Improved **data accuracy by 30%** on 100+ smart contracts through labelling, validation, and peer-reviewed QA

NUS School of Computing   Aug 2023 – Nov 2024
Teaching Assistant

- Conducted weekly tutorial sessions for 14 students, enhancing grasp of **Java** fundamentals
- Devised and taught classes on problem-solving methodologies, data structures and algorithms, sorting, recursion, testing and debugging

PROJECTS

Capstone BNPL e-Wallet Platform | *React, React Native, Express.js, PostgreSQL*   Aug 2024 – Nov 2024
- **React Native** for Customer mobile app, **React** for Merchant and Admin portals, all using **TypeScript**
- Database built with **AWS RDS** using **Prisma** as ORM, storage using **AWS S3**, deployed with **AWS EC2**
- Unit testing implemented using **Jest**, payments integrated with **Stripe API**
- Built **AI** credit scoring system with 82% accuracy, deployed as microservice for real-time score updates
- Received **Best Project Award - Gold** in NUS School of Computing Term Project Showcase 2024

Carpooling & Routing Web Application | *React, JavaScript, Firebase*   May 2023
- Web app that facilitates easy employee group formation and route optimisation for carpooling to the office
- Attained **Top 4** at LifeHack 2023 Hackathon

EXTRA CURRICULAR ACTIVITIES

NUS Computing Club: Served as Director of Partnerships (Student Life)
Certifications: Google Cloud Professional Machine Learning Engineer, Google Advanced Data Analytics, Google UX Design
Awards: NUS School of Computing Best Capstone Project Award 2024 - Gold, LifeHack 2023 Hackathon Finalist

TECHNICAL SKILLS

Languages: Java, Python, HTML, CSS, JavaScript, TypeScript, SQL
Frameworks: React, React Native, Expo, Next.js, Express.js, Spring Boot
Developer Tools: MySQL, Node.js, Firebase, Git, Jest, Figma, Material UI, Tailwind CSS, Sass, Jira