

TAN SONG YUN

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PROFESSIONAL EXPERIENCE

- Software Engineer Intern**, Credit Suisse May 2023 – Jul 2023
- Developed a high-usability data query tool in Typescript and AntD for business analysts and product teams, enabling search, view and extraction of >30k financial products with autocomplete, tabination, bulk upload and export features
 - Streamlined query processes by 80% by eliminating inefficiencies of manual data query in Elasticsearch query
 - Implemented extensive test scripts, providing >95% code coverage to ensure software reliability for feature release
 - Set up databases and endpoints with Kotlin, Spring Boot and Gradle to store responses from a feedback widget
- Software Engineer Intern**, Ninja Van Jun 2022 – Aug 2022
- Engineered an asynchronous system to automate the collection of cash-on-delivery payments from delivery drivers using DBS Bank API for cross-bank Giro payments (Go, Gin, Apache Kafka, Protocol Buffers, 14 REST APIs)
 - Scheduled cron jobs with Quartz, managed databases with SQLBoiler, implemented unit tests with Ginkgo and MockGen, and deployed the software with Redis and Docker
 - Designed a scalable, maintainable and fault-tolerant software architecture and database system
 - Collaborated effectively with multiple stakeholders and engineering teams to align product closely to business needs
- Machine Learning Intern**, DSO National Laboratories May 2021 – Jul 2021
- Enhanced and adapted deep-learning models from erroneous baseline models to identify and remove text cleanly from images using OpenCV, Tensorflow, PIL, which was also subsequently integrated into other department projects
 - Programmed a web-based application that deploys the models and displays images from a database along with an intuitive front-end editor to dynamically modify text on images using Vue.js, Vuex, Quasar, HTML Canvas
- Software Engineer Intern**, Yoozoo Games May 2020 – Jul 2020
- Developed a robust AI/NLP receptionist chatbot with 10 functions using Rasa and Python under a tight deadline
 - Built an interactive chatbot user interface with Speech-to-Text/Text-to-Speech capabilities for prospective MNC clients and internal projects using React.js, Node.js, HTML, CSS, Flask, Postman, Azure Cloud Services
- App Development Intern**, Defence Science Technology Agency (DSTA) Jan 2019 – Mar 2019
- Programmed an Android application utilizing user's location services and Google Maps APIs to protect against public Wi-Fi exploits by hackers using Java and XML on Android Studio

ACADEMIC QUALIFICATIONS

- Nanyang Technological University (NTU)**, Renaissance Engineering Programme (REP) Aug 2019 – Dec 2023
Bachelor of Engineering Science (Computer Science) and Master of Science in Technology Management / CGPA: 4.65/5.0
- Renaissance Engineering Programme Scholarship

PROJECTS

- Flight Booking System** ([link](#)) Jan 2023 – May 2023
- Developed a distributed system that communicate via UDP protocol with monitoring, call-back functionalities in Java
- Home Loan Predictive Models** ([link](#)) Jan 2023 – May 2023
- Built k-fold validation CART and regression models in R on cleaned dataset to make loan approval decisions based on variables such as applicant income, education background and credit score, achieving >80% accuracy
- Medical Records Application** ([link](#)) Aug 2022 – May 2023
- Designed and developed a React Native app that stores and displays patient records on iOS, Android, tablet and web
 - Implemented unit tests with React-testing-library and Jest, E2E tests with Cypress, and pre-commit hooks on Github
- Tinder for Movies** ([link](#)) Aug 2022 – Oct 2022
- Developed a movie-selection platform to indicate movie interests and view movies matched within friend groups
- REP Humanitarian Engineers and Leaders (HEAL)** Sep 2019 – Sep 2021
- Led team of 9 to engineer a cost-efficient machine to make water accessible for overseas less-privileged communities

SKILLS & HACKATHONS

Programming/Markup Languages: Python, JavaScript, TypeScript, Go, Java, Kotlin, C, R, SQL, HTML, XML
Libraries/Frameworks: React.js, React Native, REST, Gin, Spring Boot, Flask, Kafka, Vue.js, Quasar, Quartz, Pandas
Other Technical Tools: Git, Scrum, Jira, Gradle, Maven, Node.js, PostgreSQL, SQLBoiler, Protobuf, Figma, Postman
Hackathons: CodeIT Suisse Top 10, DSTA Brainhack, GovTech Stack the Flag, Shopee Code League