

NG XUAN YI

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EDUCATION

NANYANG TECHNOLOGICAL UNIVERSITY

50 Nanyang Ave, Singapore

Double Degree Programme:

Expected May 2026

- Bachelor of Computing (Computer Science)
- Bachelor of Business (Specialisation in Business Analytics)

Hackathons:

- PSA Code Sprint 2023 [13th Place]

WORK EXPERIENCE

Bytedance Singapore

1 Raffles Quay, Singapore

Site Reliability Engineer Intern, Traffic Platform

18 Aug 2025 – Present

- Upcoming internship with confirmed responsibilities including configuration and deployment of L7 load balancers, and lifecycle operations of Kubernetes clusters such as upscaling and downscaling; will also be involved in additional tasks across the traffic platform as the internship progresses.

Tencent Singapore

79 Robinson Rd, Singapore

Site Reliability Engineer Intern

May 2025 – Aug 2025

- Reverse engineered Dune: Awakening APIs by analysing HTTP traffic via a MITM proxy, and built automated backend processes to acquire, refresh, and sync game server data without official documentation or API keys.
- Leveraged this data to develop and containerize a real-time status web application for Dune: Awakening using Docker Compose, enabling internal users to monitor live player population, battleground metrics, and server activity across multiple regions.
- Designed and deployed an SRE monitoring pipeline using Prometheus, AlertManager, and Node Exporter to track application uptime, server health, performance, and user engagement.
- Containerized the monitoring infrastructure with Docker Compose, integrated Grafana for real-time visualizations, and implemented automated Slack alerting—exposing backend and frontend metrics to ensure robust observability and rapid incident response.

DSO National Laboratories

12 Science Park Dr, Singapore

Software Engineer Intern

Jan 2025 – May 2025

- Maintained and enhanced Warden, an internal OS hardening web platform where users upload PC details to enable remote hardening via SSH based on CIS security benchmarks. Key improvements included replacing WinRM with SSH to allow secure, internet-free installations, and introducing Swagger API documentation to streamline developer onboarding and facilitate API testing.
- Built a Linux policy parser to extract rule metadata, audit, and remediation bash scripts from CIS benchmark PDFs, and developed a corresponding setup script to configure remote Linux PCs with SSH access and required files for hardening via Ansible using Warden.
- Implemented full-stack Linux hardening functionality, allowing the backend to execute Ansible playbooks for file transfer and rule enforcement, with real-time WebSocket updates to the frontend on execution progress and issues.

Continental Automotive Singapore Pte Ltd

80 Boon Keng Rd, Singapore

Software Engineer Intern

June 2024 – Nov 2024

- Built a custom Jenkins plugin that integrates memory leak detection via fuzzing algorithms into the CI/CD pipeline, enabling early identification of memory issues and improving software stability; enhanced developer efficiency by adding detailed logging and storing crash artifacts directly in Jenkins builds for faster debugging.
- Implemented an Express.js server to automate Docker container deployment for fuzzing tests, with automated crash reporting that saves problematic seed files and error outputs, enhancing error tracking and troubleshooting.

EV-Electric (EVe) Charging Pte Ltd

251 N Bridge Road, Singapore

Data Analyst Intern

May 2023 – July 2023

- Automated data collection, analysis, and reporting for EV charger locations and pricing trends, saving hours of manpower per month and supporting strategic infrastructure planning.
- Analysed charging behaviour to pinpoint high-demand areas and provided data-driven recommendations for the strategic deployment of fast and slow EV chargers.

UNIVERSITY PROJECTS

Bus Express SG | Android (Kotlins + Jetpack Compose)

Dec 2022

- Published an application that details the arrival timings, occupancy rates, and other details of Singaporean buses on Google Playstore, by retrieving relevant information from LTA Datamall APIs via Retrofit and Room APIs.
- Furnished the application UI layer with beautiful aesthetics using Material Design & Jetpack Compose.
- Provided accessibility features whenever possible with Google's Talkback.
- Implemented dark mode, navigation features, and allowing users to create a favourites list.

ADDITIONAL

Languages: C, C++, Java, JavaScript, Kotlin, Python, R, TypeScript

Backend Frameworks: Django, Django REST Framework, Express.js, Flask, NestJS, Node.js, Pandas, Retrofit

Frontend: Android Compose, Angular, Bootstrap, CSS, HTML, Jinja2 Templating, ReactJS, SASS, Tailwind CSS

Databases & ORMs: MongoDB, PostgreSQL, Prisma, SQLite3

DevOps & CI/CD: Docker, Docker Compose, GitLab CI/CD, Kubernetes, Terraform

Cloud Platforms: Amazon Web Services (AWS), Microsoft Azure

Monitoring & Observability: Prometheus, Prometheus Alertmanager, Grafana, Loki, Tempo

Tools & Miscellaneous: Data Analytics, Git, Linux, Unit Testing