

HO GUAN TING

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EDUCATION

Monash University

Bachelor of Computer Science in Advanced Computer Science

Subang Jaya

Expected Graduation: Nov. 2026

TECHNICAL SKILLS

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

Framework & Tools: REST APIs, FastAPI, Node.js, gRPC, Kafka, PostgreSQL, MongoDB, Apache Spark, Redis

Infrastructure: Docker, GitHub Actions

Spoken Languages: English, Mandarin, Malay

EXPERIENCE

Mindhive

Glenmarie

Software Engineer Intern

Nov. 2025 – Feb. 2026

- Delivered 20+ responsive frontend screens across 5–6 ERP modules, including users, items, sales, logistics, and warehouse operations, using React and TypeScript for production-released workflows.
- Built complex enterprise UI patterns, including data tables, filtering, pagination, CSV import/export, validated forms, and unsaved-change protection, using React Hook Form, Zod, and shared component patterns.
- Integrated API-driven workflows and managed client-side state across modules using Redux, Context, and React Query, resolving data-mapping bugs and implementing RBAC for module and feature-level visibility.
- Partnered with product managers and backend engineers through requirement refinement, Agile sprints, UAT, production release, and post-release iteration.

TeamWork Program, Monash Warwick Alliance

Remote

Product Strategy Intern — BDO

Jun. 2024 – Jul. 2024

- Coordinated a 6-member international team across time zones to scope and propose a CSR platform for BDO, structuring the PRD, user flows, feasibility research, and final stakeholder-facing proposal.
- Evaluated technical and vendor options, including Google Cloud Vision API for document/image verification, to inform implementation trade-offs presented to internal and external stakeholders.

PROJECTS

AWAS Real-Time Traffic Violation Detection System

Kafka, Apache Spark, MongoDB, Docker, Folium

- Built a real-time streaming pipeline simulating Malaysia's AWAS traffic enforcement system, ingesting 50,000+ vehicle events from Kafka producers and processing violation records with Spark Structured Streaming.
- Implemented instantaneous and average-speed violation detection using event-time processing, watermarking, stateful aggregation over streamed vehicle records, and configurable rule thresholds.
- Designed MongoDB data models and idempotent write logic with compound natural keys, geospatial indexing, and TTL expiration to support reliable storage and cleanup of violation events.
- Built Folium-based geospatial dashboards with a teammate to visualize detected violations and validate streaming outputs in a reproducible Docker/Jupyter environment.

PayOnce - Fault-Tolerant Payment API

Go, PostgreSQL, Redis, RabbitMQ, Docker, GitHub Actions

- Built an idempotent payment API preventing duplicate payment creation under retries, concurrent requests, and partial failures, using PostgreSQL uniqueness constraints and Redis locks for contention reduction.
- Designed RabbitMQ-based asynchronous payment processing with an idempotent worker, retry-safe state transitions, and a transactional outbox for reliable message publishing.
- Added containerized local infrastructure, CI checks, and unit/integration tests to validate replay behavior, Redis fallback, worker redelivery, message ordering risks, database migrations, and background worker reliability.

Edge-Optimized Video Frame Interpolation on Android

Kotlin, Jetpack Compose, PyTorch, ONNX Runtime, NNAPI

- Built a native Android demo app with Kotlin and Jetpack Compose to run video frame interpolation fully on-device.
- Optimized a CNN-based PyTorch frame interpolation model (IFRNet) for mobile inference using pruning, post-training quantization, lightweight architectural adjustments, and ONNX conversion.
- Deployed an ONNX Runtime + NNAPI pipeline, reducing inference latency by 3x and model size by 90% while maintaining strong interpolation quality (PSNR 33.7, SSIM 0.972).