

Hok Heng

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PROFESSIONAL SUMMARY

Highly motivated Software Engineer and Computer Science graduate with a proven ability to deliver robust, scalable full-stack applications and automation systems. Strong expertise in AWS cloud services, JavaScript frameworks, and SQL, with real-world experience leading projects from concept to production. Known for rapidly mastering new technologies, delivering clean and maintainable code, and translating complex business needs into impactful technical solutions. Eager to contribute to fast-moving teams building innovative software that drives real-world outcomes.

EDUCATION

RMIT University, City Campus | Melbourne, VIC

Feb 2021 – Dec 2023

Bachelor of Computer Science

- Distinction average, with a focus on cloud computing, software engineering, and databases
- **Certifications:** MS Power Platform Fundamentals, IBM Developing Front-End Apps with React, IBM Cloud Computing, RMIT Resilience & Adaptability, RMIT Sustainability 101

WORK EXPERIENCE

Freelance Software Engineer

Apr 2025 – Present

- Developed an end-to-end serverless **ETL pipeline** using AWS (Lambda, S3, SQS, Textract) to automate data extraction from financial documents
- Trained and fine-tuned a custom ML model tailored to client invoice formats, achieving an **F1 score of 94.3%**
- Built and integrated a Telegram bot with WebSocket for real-time image ingestion and OCR triggering
- Achieved significant time savings, improved data accuracy, and laid the groundwork for future automation scalability

Software Engineer Intern | Beyond Zero Technologies

Nov 2024 – Feb 2025

- Co-developed a high-impact sustainability dashboard used by one of Australia's top logistics providers
- Optimised rendering performance of a WebGL-based interactive dashboard, resulting in a **40% increase in FPS** and smoother real-time visualisations
- Collaborated in bi-weekly Agile sprints with QA and product teams, resulting in the successful rollout of **3 major product features**
- Recognised by senior engineers for rapid onboarding and strong contributions across both frontend and backend codebases

Machine Learning Engineer Intern | Sahara Space Pty Ltd

Jul 2023 - Nov 2023

- Part of the pioneering team that laid the foundation for a novel pose-estimation ML model using satellite imagery
- Improved model performance through rigorous testing, hyperparameter tuning, and architecture refinement, achieving an **F1 score of 76%** on validation data
- Delivered technical insights and prototypes to a cross-disciplinary aerospace team, setting the stage for further development and deployment

Customer Service Team Member | Woolworths QV

Mar 2023 - Jan 2024

- Delivered excellent customer experiences by rotating across service roles, handling queries, scanning items, and supporting team operations
- Recognised for adaptability and collaboration in a fast-paced retail environment

PROJECTS

Portfolio Website – React, Next.js, Tailwind CSS

- Created a polished, mobile-first portfolio showcasing technical work and career milestones
- Integrated modern tooling: Framer Motion (animations), Zod (form validation), React-hook-form, Toastify, and Resend (email delivery)
- Achieved fast load times, sleek design, and high engagement through optimised UX and accessible layout

Patient Management System (Backend Microservices Architecture) – Java (Spring Boot)

- Architected and implemented a cloud-ready, microservices-based patient management system handling scheduling, records, and authentication
- Built robust microservices using **Spring Boot**, following **MVC architecture**, and integrated **gRPC + Protobuf** for efficient service-to-service communication
- Developed a dedicated **authentication service** with **JWT-based token validation**, enforcing secure role-based access
- Designed and deployed REST APIs behind an **API Gateway**, ensuring consistent request routing and security across services
- Employed **Apache Kafka (MSK)** for asynchronous messaging and decoupled microservice communication
- Containerised services with **Docker**, orchestrated deployment via **ECS**, and configured **VPC, load balancer**, and **CloudFormation templates** for full IaC
- Simulated production-grade deployment using **LocalStack** for local AWS service emulation and tested full **CI/CD deployment workflows**
- Wrote comprehensive **unit, integration**, and **end-to-end tests**, achieving high test coverage and reliability across critical modules

Grocery Price Comparison Website – React, Spring Boot, MySQL, Docker, GitHub Actions

- Built a full-stack grocery price matching and delivery platform using **React** frontend and **Spring Boot MVC** for backend microservices
- Designed and implemented RESTful APIs to fetch and compare product data across stores with dynamic filtering and search
- Integrated **MySQL** database for structured data storage and used **Docker** to containerize services for consistent local and cloud deployment
- Set up a CI/CD pipeline using **GitHub Actions** to automate testing and deployment workflows
- Employed **MVC architecture** and followed clean code practices to ensure maintainability and scalability