Ethel Lim Jia Yee

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EDUCATION

Monash University Australia

Bachelor of Software Engineering (Honours) Jul 2021 - Jun 2025

- First Class Honours Graduate | GPA: 3.59/4.0
- Dean's Honours List: 2022, 2023, 2024, 2025
- Relevant Coursework: Object-Oriented Principles, Agile Methodologies, Software Quality Testing, Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing, Game Modelling, Data Structures & Algorithms

TECHNICAL SKILLS

- **Languages and Tools:** Python, Java, JavaScript, TypeScript, SQL, HTML, CSS, React, React Native, JavaFX, Node.js, Express.js, Nuxt.js, Vue.js, PyTorch, TensorFlow, MySQL, MongoDB, Firebase, Supabase, Git, GitHub, GitLab, GitLab CI/CD, Tableau, Figma, Python unittest
- **Functional Expertise:** Frontend, Backend, System Design, Database Management, Agile Methodologies, DevOps, MLOps, Machine Learning, Reinforcement Learning, Large Language Model (LLM), Supervised Learning, Unsupervised Learning

PROFESSIONAL EXPERIENCE

Monash University Faculty of Information Technology

Full Stack Engineer Intern Jun 2024 - Jul 2024

- Designed and developed a scalable submission system for a multi-agent pathfinding (MAPF) research web platform using React, Node.js (Express.js), and MongoDB, supporting end-to-end solution uploads and evaluation workflows.
- Implemented a secure one-time API key authentication mechanism with configurable expiry dates, enabling safe external solution submissions while ensuring data integrity and controlled access.
- Optimised system performance to reliably handle 1,000+ concurrent solution submissions, enabling users to evaluate algorithms across 33 dynamically generated map scenarios without degradation in responsiveness.

Orangesoft

Web Developer Intern Dec 2024 - Feb 2025

- Led a small development team to implement production-ready websites based on provided UI/UX designs, using TypeScript-based Vue.js and Nuxt.js, ensuring accurate translation of design specifications into functional components.
- Analysed UI/UX requirements and collaborated closely with stakeholders using Agile/Scrum methodologies, planning weekly tasks, managing priorities, and ensuring timely delivery of features.
- Enhanced frontend performance and user experience by ensuring smooth, responsive page transitions and optimising component structure for maintainability and scalability.

Monash University - Industry Project (CSL Behring)

Software Engineer Feb 2024 - Nov 2024

- Collaborated with CSL Behring researchers to enhance an AI-driven biochemist robot, supporting precise chemical dispensing via configurable inputs and machine learning models.
- Re-architected the MLOps pipeline to improve efficiency, reliability, and reproducibility across model training, validation, and deployment workflows.
- Implemented a cloud-based data management system using Firebase, replacing CSV storage and achieving a ~90% reduction in storage usage while improving data accessibility.

PROJECTS

AI-Powered Meeting Summarisation Web Application

Product Owner / Full Stack Developer Feb 2023 - Oct 2023

- Led a cross-functional team as Product Owner to deliver an AI-powered meeting summarisation web application that automatically generates concise summaries from video recordings using GPT-4 APIs.
- Designed end-to-end UI/UX in Figma based on user requirements, and developed a full-stack MERN application with a React frontend, Node.js/Express backend, and scalable MongoDB database.
- Integrated GPT-4 APIs to automate transcription, summarisation, and translation workflows, created RESTful APIs to connect the frontend and database, and designed efficient MongoDB schemas to support fast data retrieval and long-term scalability.

RNN Models for Automated Recipe Generation

AI Engineer Apr 2025 - Jul 2025

- Developed and evaluated six Recurrent Neural Network (RNN) models using PyTorch to generate complete cooking recipes from input ingredients, focusing on sequence coherence and ingredient relevance.
- Preprocessed and structured raw cooking datasets into training, validation, and test splits, enabling systematic experimentation and fair performance evaluation.
- Iteratively enhanced model architectures through fine-tuning and the integration of advanced mechanisms (e.g. copy and coverage mechanisms), achieving a 10% performance improvement as measured by the BLEU score.

OTHER SKILLS AND INTERESTS

- **Languages**: English, Mandarin, Malay, Cantonese