

Ghifari Arsa Ranandya

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EDUCATION

Monash University

Masters in Artificial Intelligence (Research Pathway)

- **Current GPA: 4.0/4.0**

Expected: July 2027

Melbourne, VIC

Stanford University (Visiting Summer Student)

Machine Learning and Symbolic Systems

Aug. 2026

Stanford, CA

RMIT University

Bachelor's of Computer Science

- **Graduated with Distinction**

Dec. 2024

Melbourne, VIC

RELEVANT EXPERIENCE

Cao Lab for Medical AGI/ASI

Artificial Intelligence Engineer / Researcher

Feb 2026 - Present

Melbourne, VIC (Remote)

The Cao Group builds medical artificial general & superintelligence to push the frontiers of medical knowledge and make world-class healthcare available for all.

- Architected and developed a modular, API-based Retrieval-Augmented Generation (RAG) service adopted across multiple research and product initiatives within the lab.
- Evaluated and benchmarked diverse RAG strategies (retrieval pipelines, chunking methods, embedding models, reranking, and hybrid search) to optimise factual accuracy, latency, and domain grounding.
- Designed and built an AI-powered learning platform for Monash postgraduate medical students, leveraging knowledge graphs and RAG pipelines to accelerate mastery and personalised study.

Monash Deep Neuron

Artificial Intelligence Engineer / Team Lead

Sep 2025 - Present

Melbourne, VIC (Remote)

DeepNeuron is a student team focused on improving the world with Artificial Intelligence (AI) and Optimised Computing (OC).

- Developing a Reinforcement Learning Agent for autonomous laparoscopy surgery such as appendix and gallbladder removal and expanding its capabilities to include other surgical procedures and automate robotic systems.
- Deploying and serving self-hosted Large Language Models using **vLLM** for efficient inference and experimentation.
- Experimenting with Vision-Language-Action (VLA) and Multimodal Large Language Models (MLLMs) for surgical reasoning, perception, and decision-making.

AssistX Enterprise

Full-Stack Developer

Dec. 2024 – Nov. 2025

Melbourne, VIC (Remote)

AssistX Enterprise is a Jakarta-based AI technology company (founded in 2018) that develops advanced, enterprise-grade solutions in computer vision, data optimization, retrieval-augmented generation and intelligent document processing.

- Led the development of AssistX Copilot, a user-friendly file management system, to simplify RAG workflows for end users, utilizing Python for backend file processing, user management and Next.js for frontend interface design.
- Developed a Python-based queuing system API using CuPy and FastAPI for GPU parallel processing, increasing daily file handling capacity and instant file processing thus reducing API call wait times from 2-3 minutes to zero.
- Developed a custom AI workflow in 3 weeks for a provincial council, enabling natural language querying of a

large digital archive using a hybrid no-code and coding tool, improving data accessibility for non-technical users.

Reyts Fintech

Jun. 2024 – Nov. 2024

Software Developer Intern

Melbourne, VIC (Remote)

Reyts Fintech Inc. is a financial technology company that reimagines currency exchange through a peer-to-peer (P2P) model, built on principles of community, transparency, and inclusion.

- Worked as part of a development team tasked with revamping the entire admin dashboard using Vue.js, focusing on improving usability and functionality.
- Collaborated closely with other developers to ensure the project adhered to best practices, resulting in a high-quality, maintainable codebase.
- The founders were highly satisfied with the revamped dashboard, praising its improved usability and ease of use.

PT Kreasi Sentra Solusindo

Jul. 2021 – Dec. 2021

Software Developer Intern

Jakarta, Indonesia

KS Solusindo is a full-service technology provider that brings solutions to our clients with software development, Internet of Things (IoT), consultancy, technology security solution, and training to help them scale faster and more efficiently and effectively.

- Designed financial reports using Jaspersoft Studio, enhancing data visualization and reporting accuracy for factory operations.
- Created an algorithm for converting numerical values to Indonesian words for automated invoicing.
- Implemented a fully automated invoicing system for factory operations, eliminating manual invoicing and improving speed and accuracy by 100%.

VOLUNTEER EXPERIENCE

Indonesian Film Festival

Sep 2023 – Apr. 2024

Liaison Co-Coordinator

Melbourne, VIC

Established in 2006, IFF is Australia's leading celebration of Indonesian cinema, dedicated to promoting cross-cultural understanding and elevating Indonesia's film industry on the international stage.

- Directed a team of dedicated members in executing liaison tasks for events. Provided guidance, set goals, and ensured effective collaboration among team members.
- Orchestrated liaison activities for various events, including communication with external stakeholders, sponsors, and partners. Facilitated seamless interactions between different teams to enhance overall event success.
- Fostered a culture of collaboration within the liaison team and across different departments. Coordinated efforts to streamline communication channels and enhance efficiency in liaising with external entities.

SKILLS, TECHNOLOGIES, LANGUAGES & INTERESTS

- **Languages:** Python, TypeScript/JavaScript, Java, C++, SQL, Go
- **AI/ML & LLM Systems:** RAG pipeline design (hybrid BM25/dense retrieval, hierarchical chunking, cross-encoder reranking), vLLM, LlamaIndex, Neo4j (knowledge graphs), pgvector, RAGAS/DeepEval, Ollama, LiteLLM, Vertex AI, prompt/context engineering
- **Backend & Data:** FastAPI, PostgreSQL, Redis, psycopg3 (async), Node.js, REST API design, System Architectures
- **Frontend:** React, Next.js
- **Cloud & DevOps:** AWS (EC2), Azure, Docker, GitHub Actions (CI/CD), Nginx
- **Other:** Git, Agile/Scrum
- **Interests:** Golf; Bouldering; Building Computers; DIY Home Projects; AI development and research; Machine Learning;