

Raj Pulapakura

Full Stack Software Engineer

rajedwinpulapakura@gmail.com

0469 766 823

Cranbourne West, Melbourne, Victoria 3977

www.linkedin.com/in/rajpulapakura/

www.github.com/raj-pulapakura/

TECHNICAL SKILLS

Languages	TypeScript, Python, Bash, JavaScript, HTML/CSS/SAAS
Frontend and Backend	React.js, Next.js, Nest.js, HTML, CSS, SaaS, Tailwind, Material UI, Redux, Zustand, Node.js, FastAPI, Flask, Express.js, GraphQL
AI (ML + Generative AI + Data Science)	OpenAI, Gemini, Claude (APIs), Unstructured.io, Pinecone DB (vector database), MCP
Databases	MongoDB, SQL, MySQL, PostgreSQL, Redis, Firebase, ChromaDB, Snowflake, Coalesce
Cloud, CI/CD	AWS <i>certified</i> (ECR, EKS, EC2, S3, IAM, DynamoDB, Lambda, Athena, Glue) Azure <i>certified</i> (Storage, AI Services, Function App, Cosmos DB, Entra ID) Terraform, Git, GitHub, Docker

PROFESSIONAL EXPERIENCE

AI Engineer	Synogize (Data & AI agency)	Sep 2025 - Present
<ul style="list-style-type: none">- Product Delivery: Key contributor to PLATTII (AI-driven Snowflake marketplace product for data analysis intended for non-technical users). Contributed to <u>slashing inference time by 50%</u>, optimising frontend loading and session management. Led and participated in sprint planning and Agile workflows.- Data Engineering & Consulting: Developed 10+ data models for an international automotive company as part of modern data migration project. Contributed to requirements gathering discussions. Tools used: Snowflake, Coalesce, GitHub,- Knowledge Sharing: Assisted in developing the company's AI capability through Azure AI Foundry RAG demos and knowledge sharing.- Tools used: Agile methodology, Next.js, FastAPI, TypeScript, Python, Azure, Snowflake, SQL, Generative AI APIs (OpenAI, Gemini, Claude), Git, GitHub Actions		
Software Engineer	Time Under Tension (Generative AI B2B agency)	April 2024 - Sep 2025
<ul style="list-style-type: none">- Flagship Project: Developed a RAG chat system for a retail giant, connecting to their extensive product database. Cut customer service response time from <u>3+ hours to under 30 seconds</u> for complex product inquiries. <i>Tech stack: React.js, Nest.js, TypeScript, Azure (Cosmos DB, Web Apps, OpenAI, AI Search), Pinecone DB</i>- Flagship Project: Engineered an AI-powered app for the legal and compliance teams of a multinational corporation. App scans product database and detects non-compliant product descriptions using AI with <u>95% accuracy</u>. AI system then auto revises descriptions as per user-provided guidelines, slashing review times by <u>over 300%</u>. <i>Tech stack: Same as above</i>- Proof-of-concepts, R&D: Voice (and chat) agent for an age-care service provider; Tool that converts Figma files to code via Cursor + MCP; SaaS application that converts text documents into PPT presentations.- Liaised with technical and non-technical client personnel to conduct discovery calls, gather requirements, discuss project progress, and conduct live demonstrations of deliverables.- Technologies used: React.js, Nest.js, TypeScript, Python, Azure's suite of AI and Compute services, Generative AI APIs (OpenAI, Gemini, Claude), Pinecone DB, Unstructured.io, Git, GitHub Actions		
Software Engineer, Intern	A.I.GORITHM (AI Startup)	Jan - Feb 2024
<ul style="list-style-type: none">- Engineered a tool that enables farmers to gather detailed insights of their AOI (Area of Interest).<ul style="list-style-type: none">o Insights: Bushfire likelihood, precipitation rates, satellite imageryo Tech stack:<ul style="list-style-type: none">▪ Python backend which solicited 6 geospatial third-party APIs.▪ Next.js, TypeScript and Docker frontend.		

- **AWS** (ECS, ECR, LB, S3, Athena and Glue) deployment. Stored several large-scale agricultural datasets (>1TB) in Apache Parquet and CSV.
- Conducted DevOps using **Terraform** and **GitHub Actions**.

CERTIFICATIONS

- Microsoft Certified: Azure Developer Associate	Jan 2026
- Microsoft Certified: Azure AI Associate Engineer	Sep 2024
- Microsoft Certified: Azure AI Fundamentals	Aug 2024
- Microsoft Certified: Azure Fundamentals	Jul 2024
- AWS Certified Machine Learning - Specialty	Jun 2024
- IBM Professional Machine Learning Certificate, IBM	Sep 2023

PERSONAL PROJECTS

Personal Website: www.rajpulapakura.com (for additional information and projects)

ClarityScan: Deep Learning for Tumour Diagnosis ([code](#), [video](#))

A medical analysis tool that enhances brain MRI scans and automatically identifies glioma tumours in the scans.

- Developed a web application so that radiologists can upload their MRI scans, denoise them, and automatically identify glioma tumors.
- Implemented 2 AI models using TensorFlow for Noise Removal and Tumor segmentation, reaching a Dice Coefficient of up to 91%.
- Deployed models to APIs with GPUs using FastAPI and Modal serverless functions, ensuring inference time during production was ~5 seconds.
- Technologies used: Next.JS, TypeScript, Tailwind CSS, Python, TensorFlow, NumPy, FastAPI, Modal, AWS ECS & LB, Git, GitHub, AWS ECS, AWS ECR, AWS EC2

Computer Vision Search Engine ([code](#), [web](#), [video](#))

An app for finding similar images based on images you already own.

- Employed a pre-trained MobileNetV3 neural network in PyTorch to compute image embeddings.
- Deployed the model through to a BentoML backend, hosted using AWS API Gateway and AWS Lambda.
- Developed a web interface with drag-and-drop functionality enabling users to find similar images.
- Technologies used: Python, PyTorch, REST API, BentoML, TerraForm, AWS API Gateway, AWS Lambda, Next.JS, TypeScript, Vercel, Tailwind CSS, Git, GitHub

OTHER

- Passionate about AI agents, system architecture, and building enjoyable user experiences.
- Write a technical blog on [Medium](#), sharing content on AI, machine learning, deep learning, computer vision, full-stack development, and software development.
- Post videos on my [YouTube](#) channel, demonstrating my projects and sharing knowledge on machine learning and data science, web/mobile development, and software engineering.
- Love to stay active by playing basketball, volleyball and swimming.