

# Rohith Kumar Naidu Movva

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## Professional Summary

Results-oriented **AI & Cloud Engineer** and **Full Stack Developer** with specialized experience architecting enterprise-grade, cloud-native applications for the financial sector. Proven track record at **Commonwealth Bank of Australia (via Persistent Systems)** in delivering the COO division's **first fully serverless AWS solution** and pioneering **Agentic AI** workflows. Passionate about leveraging Multi-Agent Systems (LangGraph), Generative AI, and Microservices to automate complex business processes and drive operational efficiency.

### Core Competencies:

- **Agentic AI & LLMs:** Expert in designing Multi-Agent Systems using **LangGraph**, OpenAI (GPT-4V), and RAG architectures for intelligent document processing.
- **AWS Cloud-Native Architecture:** Deep expertise in **Serverless** computing (ECS Fargate, Lambda, SQS) and Infrastructure as Code (GitHub Actions).
- **Full Stack Development:** Strong background in the **MERN Stack** (React.js, Node.js) and Python (FastAPI), building scalable APIs and responsive UIs.
- **Financial Domain:** Experience delivering secure, compliant solutions for high-volume banking operations (Payments & Mortgages).

## Tools and Technology

**AI & LLMs:** LangGraph (Multi-Agent Systems), LangChain, Langfuse (LLM Observability), OpenAI API (GPT-4V), RAG, Vector Databases, Prompt Engineering, Semantic Search, Agentic Workflows

**ML & Data Science:** TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, OpenCV, spaCy, NLTK

**AWS:** ECS Fargate, Lambda, SQS, ALB, S3, Aurora, VPC, CloudWatch, EC2

**Programming:** Python, JavaScript, TypeScript, Node.js, SQL

**Backend:** Node.js, Express.js, Fast API, RESTful APIs, Microservices Architecture

**Frontend:** React.js, HTML, CSS, JavaScript, Tailwind CSS, Responsive Design

**Database:** AWS Aurora (SQL), PostgreSQL, MongoDB Atlas

**DevOps & Tools:** GitHub Actions (CI/CD), Docker, Git, Postman, Bruno, JIRA, Agile/Scrum Methodology

## Professional Experience

### Commonwealth Bank of Australia (via Persistent Systems) | Sydney, Australia

**Role: AI Engineer & Full Stack Developer**

Dates: April 2025 – Present  
Key contributor to the Chief Operations Office (COO) modernization, delivering the division's first fully cloud-native AWS application and pioneering Agentic AI workflows for mortgage

#### Payment Automation (Cloud-Native Payment Issuer)

**Architecture:** Designed and built a serverless payment processing engine using AWS ECS, Lambda, ALB, SQS, and Aurora DB. This was the pivotal "first project" in the COO office to utilize a 100% AWS cloud-native stack, **successfully scaling to process 10,000+ daily transactions with 99.9% uptime.**

#### API Design & Data Flow:

- **Ingestion:** Built high-performance REST APIs to ingest Home Loan Closure data, implementing strict schema validation and business rule enforcement at the ingress layer before persisting to Amazon Aurora.
- **Processing & Retrieval:** Engineered a polling mechanism for downstream consumers to retrieve processed payment instructions securely.
- **State Synchronization:** Implemented a feedback loop where downstream systems trigger status updates via PATCH calls, ensuring real-time consistency between the payment engine and the core banking ledger.

**Data Validation & Flow:** Developed robust REST APIs (Node.js) to ingest upstream data from Home Loan Closure systems. Implemented schema validation and business logic to filter, process, and route data to the Pay Central downstream system.

**Infrastructure & CI/CD:** Utilized **GitHub Actions** for end-to-end deployment, managing both application code and AWS infrastructure provisioning.

### Intelligent Doc Capture (Agentic AI & LangGraph)

**Agentic Orchestration:** Architected a Multi-Agent System using LangGraph to automate the classification, extraction, and validation of incoming documents in **different formats, reducing document processing time from 15 minutes to 2 minutes (87% improvement) per case.**

#### AI Components:

- **Orchestrator Agent:** Manages the global state and routes tasks between specialized agents based on document context.
- **Classification Agent:** Leverages GPT-4V (Multimodal) to categorize documents and extract structured entities into JSON formats, achieving 94% extraction accuracy.
- **API Tools Agent:** Developed a "Tool-Use" capability where the agent autonomously queries internal Banking APIs (Customer Profile, Accounts, Facility, WIM) to retrieve ground-truth data.
- **Validation Agent:** Implemented a Logic Agent that cross-references extracted values against API data. It calculates field-level confidence scores and verifies signature presence to determine if the case requires human intervention ("Human-in-the-Loop"), reducing manual data entry workload by 70% by routing only low-confidence cases to staff.
- **Tech Stack:** Built using Fast API for endpoints, PostgreSQL for state management, and Langfuse for prompt tracing/observability.

**Impact:** Drastically reduced manual data entry by enabling autonomous "Human-in-the-loop" processing, where only low-confidence cases are routed for human review.

### Mortgage Discharge Filtering (AI-Powered Email Automation)

**System Design:** Developed an AI-powered triage system to monitor email inboxes via Microsoft Graph API, analyzing discharge requests and attachments to automate case creation in **Pega**, successfully automating the classification of 500+ daily discharge requests.

#### AI Components:

- **Discharge Triage Agent:** Manages the end-to-end lifecycle of email ingestion and processing.
- **Content Agent:** Analyzes email body sentiment and intent to classify requests (Full Discharge, Partial, Consents, Substitutions).
- **Customer Identification:** Implemented logic to search customers via Address and Account Number to retrieve consolidated CIF and Home Loan Application (CHLM) data.

**Integration Strategy:** Engineered the final "Handoff" layer that consolidates all extracted intelligence into a strict JSON schema and triggers the Pega Case Management API, automatically creating cases with pre-populated fields for operations staff, reducing workload by 60% and eliminating manual triage bottlenecks.

**SAP & Enterprise Clients (via Green Light Worldwide) | Sydney, Australia | Role: Network & IT Support Engineer (Contract) | Dates: Feb 2025 – Apr 2025**

### Asset Management (Client: SAP)

- **Asset Lifecycle Management:** Managed the complete hardware and software asset lifecycle for **SAP's ANZ operations** (Australia & Sydney HQ), ensuring seamless device provisioning for employees.
- **Technical Support:** Diagnosed and resolved complex hardware/software issues for SAP devices, minimizing downtime and maintaining high employee productivity.

- **Process Improvement:** Streamlined the device configuration and handover process, ensuring a frictionless user experience for new and existing staff.

### Network Infrastructure Engineer (Client: Major Enterprise Firms)

- **Cisco Configuration:** Deployed to onsite "Comms Cabins" to configure and maintain **Cisco routers and servers**, acting as the physical bridge for cloud connectivity projects.
- **Hybrid Cloud Connectivity:** Physically patched and configured server ports to establish secure connections between onsite servers and cloud environments.
- **Infrastructure Maintenance:** Conducted rack-and-stack operations and troubleshooting of physical network layers to ensure high-availability server performance.

### ACS Professional Year Program | Sydney, Australia Dates: Jan 2024 – Feb 2025

#### Tiered-Access Generative AI

**Overview:** Developed a subscription-model AI chat platform with Role-Based Access Control (RBAC) to govern LLM response depth.

#### Key Features:

- **Tiered Logic:** Architected logic to throttle information density based on user subscription (Gold/Silver/Platinum), controlling token usage and context depth dynamically.
- **Session Management:** Implemented ephemeral local session storage to maintain conversational context during active sessions while ensuring data privacy upon logout.
- **Security:** Secured API endpoints using **JWT (JSON Web Tokens)** for authentication and Bcrypt for password hashing.

#### Core Competencies & Australian Workplace Integration:

- **Australian Business Communication:** Refined advanced communication strategies for technical environments, focusing on effective stakeholder engagement, requirements gathering, and presenting complex technical concepts to non-technical audiences.
- **Professional Standards & Ethics:** Gained in-depth knowledge of the **ACS Code of Ethics**, Australian Workplace Health & Safety (WHS) regulations, and privacy compliance laws relevant to secure software development.
- **Workplace Dynamics:** Developed a strong understanding of Australian corporate culture, emphasizing cross-functional collaboration, agile team dynamics, and conflict resolution within diverse engineering teams.

### Cognizant | Hyderabad, India Role: AI Engineer & Full Stack Developer Dates: Apr 2021 – Dec 2021

#### Enterprise Intelligent Support Portal

- Designed and developed a microservices-based AI-driven support portal with role-based authentication (JWT) and tiered response logic.
- Built RESTful APIs using Node.js and Express.js, integrating with MongoDB Atlas for data storage; developed responsive frontend using React.js and Tailwind CSS.
- Deployed application on AWS (EC2, S3), implementing CI/CD practices with Git for version control.
- Developed ML models using TensorFlow, PyTorch, and Scikit-learn for predictive analytics; built NLP pipelines for sentiment analysis using spaCy and NLTK.

## Personal Projects

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### Full Stack E-Commerce Platforms (Organic Mart & CycleHub)

- **Architecture:** Built two production-ready MERN stack applications hosted on **Render (Backend)** and **Vercel (Frontend)** with automated CI/CD pipelines triggered by Git commits. **Admin Ecosystem:** Developed a comprehensive **Admin Dashboard** for real-time inventory management, stock adjustments, and order lifecycle

tracking. **Payment & Logic:** Integrated **PayPal API** for real-time payment processing (CycleHub) and implemented dynamic product routing and custom domain hosting (Organic Mart).

- **Live Links:** <https://agrotecharvest.com/> , <https://ambika-bike-alley.vercel.app/>

## Custom Transformer Architecture & Computer Vision Pipelines

- **Deep Learning (From Scratch):** Engineered a **Transformer model (Encoder-Decoder)** manually implementing forward/backward propagation, weight optimization, and error functions to demonstrate a first principles understanding of GPT architecture.
- **Computer Vision:** Built image processing pipelines using **OpenCV**, applying Gaussian blurring for noise reduction, thresholding, and grayscale conversion for unsupervised learning tasks.

## Education

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**Master of Computer Science** | University of Wollongong | 2022 – 2023

**Majors:** Machine Learning, Big Data Analytics, Software Engineering

**Bachelor of Electronic and Communication Engineering** | Aurora Engineering College | 2016 – 2020

## Certification

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- AWS Certified Machine Learning - **Specialty**
- Pega 8.8 CSA Certified

## Working Rights

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- **Visa class:** 485-Post Study Work Visa
- **Working Rights:** Full Time working rights without restrictions.