

AGNE RUDHRESH RAVICHANDRAN

Software Engineer | Applied AI & Full-Stack

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Seeking a 12-month Software Engineering / Applied AI internship from Mar/Apr 2027

EDUCATION

Singapore Polytechnic

Apr 2025 - Apr 2028 (Expected)

Diploma in Applied AI & Analytics | cGPA: 4.0 / 4.0

SP Scholarship | Director's Honour Roll (Top 10%) | 6 Distinctions (Top 5%)

Relevant Distinctions: AI & Machine Learning, Data Engineering, Mathematics for AI, Programming for Data Analytics

EXPERIENCE

BuilderLab | Backend & Systems Engineer, Founding Team (Contract)

Jul 2026 - Present

AI-powered platform for designing, sourcing, and building custom hardware

- Hardened role-based access control for supplier workflows, enforcing authorization before sensitive operations.
- Made order and credit workflows race-safe, idempotent, and auditable via atomic transactions and row locking.
- Built a Python document-verification pipeline that cross-checks extraction methods and flags mismatches for review.
- Run infrastructure evaluations for the CTO; recommendations adopted across CDN, database, and hosting.
- Built a reusable coupon system for Xathon (a sponsored hackathon) and future events; gathered user feedback there.

BookMyShow Southeast Asia | F1 Singapore Grand Prix Access Control

Oct 2025

- Monitored scanner readiness during live gate operations; escalated device and connectivity issues.

PROJECTS

ReStock | Agent / AI Engineer | Show Me Your Agents, NUS-ISS

Sep 2026

- Built the LLM multi-agent layer for a 4-person team: a coordinator, 3 specialists, typed outputs, restricted tools.
- Kept quantities and costs deterministic; AI handled routing, with backend validation and manager approval.
- Built an automated evaluation harness for routing, outcomes, retries, and guardrails (7 scenarios, 3 strategies).

ReRoute | Sole Engineer (4-person team) | PSA Code Sprint 2.0

Aug 2026

- Built the FastAPI + React/TypeScript system with OR-Tools CP-SAT optimisation and persisted, replannable workflows.
- Made AI actions fail-safe: state-derived tool access, approvals bound to exact requests, and duplicate blocking.
- Preserved 4.1% more expected onward connections than a greedy baseline across 2,500 held-out synthetic scenarios.

Ask about Rudy | Conversational RAG Assistant on rudhresh.com (Next.js)

2026

- Built and deployed a conversational RAG assistant using keyword-based information retrieval and the SEA-LION LLM.
- Improved response quality with input screening, SEA-Guard checks, and a citation verifier.

GAN vs VAE | Deep Learning Study | Singapore Polytechnic

2026

- Led the GAN track on CIFAR-10 with a frozen, seed-reproducible evaluation; GAN FID 36.7 vs VAE 147.2.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL

Frontend, Backend & Databases: React, Next.js, FastAPI, REST APIs, Pydantic, PostgreSQL, Supabase, SQLAlchemy

AI Systems: LLM orchestration, tool calling, RAG, evaluation, guardrails

Machine Learning & Data: TensorFlow/Keras, scikit-learn, pandas, NumPy, OR-Tools CP-SAT

Engineering & Cloud: Git, Docker, automated testing (pytest, Vitest), Vercel, AWS Lightsail

LEADERSHIP & AWARDS

Head of Operations | SP Artificial Intelligence Student Chapter

Feb 2026 - Present

- Lead operations for AI workshops and events, coordinating facilitators, manpower, and logistics.

Software Team Member & INSPIRE Coordinator | Singapore Youth AI

Jan 2026 - Present

- Built Stride with the software team; coordinate facilitators for AI outreach reaching ~100-120 participants.

Leadership Development Coordinator (ExCo) | SP Outstanding Talent Programme

May 2026 - Present

1st Place, CSIT Category | BuildingBloCS June Jam 2026

Jun 2026