

RAHUL MITRA

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EDUCATION

National University of Singapore Bachelor of Engineering, Industrial Systems Engineering	Aug 2023 – Jul 2027
<ul style="list-style-type: none">• Pursuing a Second Major in Computer Science and a Minor in Mathematics.• Awarded Certificate of Outstanding Performance in 3D Computer Vision (CS4277): top student in a class of 24, NUS School of Computing.• Relevant coursework: Software Engineering, Data Structures and Algorithms, Artificial Intelligence, 3D Computer Vision, Operations Research, Simulation, Statistics, Linear Algebra.	

WORK EXPERIENCE

Operations Research (Contract), STMicroelectronics (NUS System Design Project)	Aug 2026 – Present
<ul style="list-style-type: none">• Design an AI-driven put-away recommendation system for STMicroelectronics' Singapore warehouse, replacing experience-based slotting with capacity-aware decisions drawn from 3 live inputs: picking history, demand forecasts, and available capacity.	
Global Operational AI Systems & Data Engineer (Contract), Abbott Laboratories	Jun 2026 – Present
<ul style="list-style-type: none">• Deliver AI-enabled systems and data workflows for process improvement, manufacturing analytics, operational decision support, and supply-chain automation.• Strengthen monitoring and process structure across healthcare supply chains with AI, protecting product availability for vulnerable patient groups.	
Robotics Vision Engineer (AI+X Global Challenge), Amazon	Jul 2026 – Oct 2026
<ul style="list-style-type: none">• Built vision systems turning raw camera feeds into perception-ready frames across 3 workstreams: camera ISP, super-resolution, and image restoration under real-world blur.	
Platform & Solutions Engineer (Sparks Citizen Developer), People's Association	Sep 2025 – Sep 2026
<ul style="list-style-type: none">• Delivered a digital garden-plot balloting platform across admin and public frontends, backend, GIS mapping, and deployment, now production-ready for national rollout across Singapore.• Integrated Singpass Login (OIDC) to secure resident sign-in and Myinfo to verify identity and address, keeping garden-plot balloting fair for 150 residents signed up at release.• Designed rules-based balloting workflows across 4 control points: eligibility checks, conflict resolution, exception handling, and administrative oversight, keeping allocation transparent and auditable.• Provisioned AWS infrastructure with Terraform across 8 services: ECS Fargate, Multi-AZ RDS Postgres with PostGIS, ALB fronted by WAFv2, Route 53, ACM, KMS, and Secrets Manager.	
Data Analytics & Product Management Intern, Abbott Laboratories	Jan 2026 – Jun 2026
<ul style="list-style-type: none">• Productionized a team-built APC simulator for live internal users on Azure App Service with Docker packaging, access restrictions, and runtime and session hardening.	

PROJECTS

Finalist, Volt Pulse SG: SMU Hack For Cities (Top 8 Finalist of 50+ teams)	Jan 2026
<ul style="list-style-type: none">• Integrated SEALION embeddings, Supabase vector search, RRF routing, and scheduler-agent planning into an autonomous loop managing electricity and utility savings across multiple HDB households at once, placing top 8 of 50+ teams.	

LEADERSHIP AND ACTIVITIES

NTUC Health Active Ageing Centre, Elderly Care Volunteer	Sep 2025 – Sep 2026
<ul style="list-style-type: none">• Coordinate weekly senior-engagement activities, building empathy for healthcare, accessibility, and community-focused product design.	

SKILLS AND CERTIFICATIONS

Technical: Solution architecture; cloud (AWS Fargate, Terraform, Azure, Docker, CI/CD); full-stack (React, TypeScript, FastAPI, Flask); Singpass Login & Myinfo (OIDC); RAG & AI agents; AI tools (Claude Code, ChatGPT, Codex, Gemini, ComfyUI); GIS mapping; accessibility; rapid prototyping
Certifications: NVIDIA Disaster Risk Monitoring with Satellite Imagery; Reinforcement Learning and Deep RL Python (Packt)