

MAAHIR RAJESH GARG

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EDUCATION

National University of Singapore

Aug 2023 – May 2027 (Expected)

Bachelor of Computing (Honours) in Computer Science | GPA: 4.71 / 5.00

Singapore

- Second Major in Quantitative Finance; Minor in Data Engineering.
- Specialisations: Artificial Intelligence (Distinction), Database Systems, Computer Networks.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, TypeScript, Swift, SQL, R, LaTeX

AI / ML: PyTorch, Hugging Face, LLM Fine-tuning, PEFT, Agentic LLMs, Tool-calling, GraphRAG, Vector Databases, Chainlit

Data & Distributed Systems: Apache Kafka, Spark, Airflow, ETL Pipelines, Snowflake, PostgreSQL, Pandas, NumPy

Cloud & DevOps: AWS (EC2, S3, Lambda), Docker, Git, Bash

Web & Tools: React, HTML/CSS, Matplotlib, MATLAB, Looker Studio

EXPERIENCE

GIC

Jan 2026 – Present

AI Engineer

Singapore

- Built an internal **Claude Code-style CLI agent** from scratch on Chainlit, with a modular tool-calling and skill-routing system over proprietary models; adopted by **100% of the team** as the primary AI-assisted development interface where classified-data constraints rule out Copilot.
- Designed and deployed agentic LLM pipelines to automate internal audit workflows; fully automated **2 previously manual data sources**, reducing evidence retrieval from hours to near-instant.

Interactive 3D Lab

May 2025 – Dec 2025

Swift Developer, Apple Vision Pro

Singapore

- Co-inventor of a **patent-pending multimodal tracking framework** for hand-eye coordination assessment in stroke rehabilitation, unifying Apple Vision Pro and iPhone into a single tracking surface at **89% cross-device accuracy** (Swift, RealityKit).
- Ran controlled user studies with healthcare practitioners to benchmark tracking accuracy, latency, and interaction fidelity; iterated the system design from empirical findings. Research paper in preparation.

National University of Singapore, School of Computing

Aug 2024 – Dec 2025

Undergraduate Teaching Assistant

Singapore

- TA for CS1231S (Discrete Structures), CS2040S (Data Structures & Algorithms), and CS3230 (Design & Analysis of Algorithms) across three semesters.
- Coached students through dynamic programming, graph algorithms, and complexity analysis; awarded **4.8 / 5.0 teaching effectiveness** against a 4.2 faculty average.

National University of Singapore

May 2025 – Aug 2025

Orbital Programme Advisor

Singapore

- Mentored **12 student engineering teams** on software architecture, implementation planning, and release management; all 12 projects passed at or above their targeted grade level.

Accelerice

May 2024 – Aug 2024

Data Engineer, NUS Overseas College

Jakarta, Indonesia

- Shipped data-driven dashboards and backend databases with Python and API integrations, improving data accessibility across the operations team by **40%**.
- Led SEO and performance optimisation: **30%** lift in search rankings, **25%** reduction in page load time, **20%** growth in organic traffic.

PROJECTS

Optimising BERT for Question Answering | *PyTorch, Quantisation, Pruning*

Nov 2025

- Reduced model size by **69%** (440MB → 128MB) with **≤0.5% F1 loss** via post-training quantisation.
- Implemented custom mask-enforced pruning to **54.7% sparsity**; profiled the efficiency-vs-generalisation trade-off.

Domain-Specific LLM Reasoning with PEFT | *BitFit, Few-Shot, PyTorch*

Oct 2025

- Built a parameter-efficient fine-tuning pipeline (BitFit + few-shot) for health-insurance claim reasoning.
- Fine-tuned **≤0.1% of parameters** (bias terms only), lifting reasoning accuracy from **47%** → **73%** on clause-extracted scenarios.

INTERESTS

Drums, Badminton, Chess, Poker, Swimming; aerial & landscape photography; creative writing.