

# AKILESH JAYAKUMAR

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## Education

### University of Wollongong (SIM Campus)

Oct 2022 – Sep 2025 (Expected)

*Bachelor of Computer Science in Cyber Security*

### Singapore Institute of Management (SIM Campus)

Oct 2021 – Sep 2022

*Diploma in Information Technology*

## Experience

### Singapore Department of Statistics

Jan 2025 – Present

*AI Engineer Intern*

- Building GenAI chatbot solutions by fine-tuning LLMs and curating training data.
- Deploying fine-tuned LLMs on the Government Commercial Cloud.
- Automating multiple data concierge workflows with GenAI.

### Home Team Science & Technology Agency

Apr 2024 – Sep 2024

*AI Engineer Intern*

- Engineered containerised RAG pipelines with the RAGAS evaluation framework using Docker and open-source LLMs from HuggingFace.
- Refactored system architecture code to support custom prompts and few-shot examples, enabling more nuanced LLM outputs tailored to specific contexts.
- Configured scalable microservices with Docker Compose, integrating core GenAI components, thus reducing deployment time by 30%.

### Central Provident Fund Board

Nov 2023 – Apr 2024

*AI Engineer Intern*

- Developed a GenAI application for sentiment analysis of employee feedback and reviews, achieving a 95% accuracy in sentiment classification for over 10,000 comments and reviews.
- Automated engagement report generation, achieving 50% faster delivery of actionable insights for proactive employee feedback management.
- Enhanced sentiment analysis accuracy by researching and fine-tuning prompt templates using GPT models.

## Projects

### NES CatalystX Hackathon 2024 | [source code](#) | [live site](#)

Oct 2024

- Developed a multimodal GenAI tutor with TTS and STT features to enhance accessibility for individuals with dyslexia, utilizing Python, LlamaIndex, and NVIDIA NIM Microservices.
- Implemented Selenium to automate interactions with web page elements, ensuring seamless and efficient functionality.

### LangGraph Agentic Chatbot | [source code](#) | [live site](#)

Oct 2024

- Designed and implemented an LLM agent capable of retrieving real-time information from the web to address user queries, leveraging Python, Gradio, LangGraph, and Tavily.

## Certifications

**GitHub Foundations:** GitHub (Jan 2025) — [view credential](#)

**Neo4j Certified Professional:** Neo4j (Sep 2024) — [view credential](#)

## Skills

**GenAI:** Python, LangChain, LangGraph, LangSmith, Gradio, ChromaDB, Qdrant, Hugging Face

**Data Science:** SQL, MongoDB, Neo4j, Pandas, Matplotlib

**Software Engineering:** JavaScript/TypeScript, HTML/CSS, Docker, Git, GitHub/GitLab