

Shahu Wagh

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SUMMARY

Applied AI and full-stack developer, Computer Science at NUS. Shipped production software at SCDF: a multi-agent roster system with deterministic guardrails (OpenAI SDK), a receipt-to-claims pipeline (AWS Textract), and a dispatch app for 150+ firefighters.

EXPERIENCE

Singapore Civil Defence Force

Oct 2024 – Aug 2026

Developer / Firefighter

Singapore

- Built a multi-agent leave-planning system (OpenAI SDK, Telegram, Google Sheets) for 41 firefighters: agents draft the roster, deterministic rule checks validate crew minimums and overlaps before any write; 100% adoption, 400+ requests, **zero scheduling conflicts**
- Built an agent pipeline (AWS Textract, LLM agents, structured outputs) that turns receipt images into completed finance claims and ready-to-send emails, saving ~6 hours/week per officer
- Built and shipped YearnOut, a full-stack iOS/Android dispatch-alert app (SwiftUI, PushKit/CallKit, FastAPI) that rings a full-screen call through silent mode using Critical Alerts; adopted by **150+ firefighters** across 2 fire stations

Univers

Jun 2023 – Jul 2023

Data Science Intern

Singapore

- Built a bilingual (English/Mandarin) RAG-based GenAI support chatbot answering product-specific queries
- Shipped it as a full-stack AWS web app (Amplify front end, API Gateway backend) for alpha testing, capturing thumbs up/down and free-text feedback on every answer

PROJECTS

3D Incident-Scene Reconstruction | *Swift, ARKit, Python, three.js*

2025 – 2026

- Built an iPhone LiDAR scanning app and GPU pipeline (splatfacto, RunPod RTX 5090) reconstructing buildings as 3D Gaussian Splats, streamed to a web viewer over Google Photorealistic 3D Tiles for fireground planning

Conversational Fine-tuning with PEFT | *Python, PyTorch, Pandas*

Jan 2024

- Fine-tuned a dialogue model with PEFT on a personal message-log dataset; built a persona-conditioned inference wrapper and published a technical write-up on AI Mind (Medium)

Sentiment Analysis Research | *Python, TensorFlow, Pandas*

Apr 2024

- Compared SGD, Adam and RMSProp for bidirectional LSTM sentiment analysis on two Twitter datasets (1.6M tweets): RMSProp at lr 0.01 won on both, reaching 0.988 weighted F1 and converging in 18 epochs against 43 for SGD

Exam Paper Generator | *Python, AWS (Lambda/S3), JavaScript*

2023 – Present

- Built, launched and maintain papergeneratorapp.com, a full-stack web app generating custom IGCSE Mathematics papers by topic, marks and year; **14,000+ papers** for **1,500+ students**, usage tripled year-on-year

ACTIVITIES

NUS AI Society | *Programmes Team*: organise AI research and engineering events

Aug 2026 – Present

Acacia College | *Industry Relations*: organise industry events and company outreach

Aug 2026 – Present

AWARDS & TEST SCORES

World Topper, Cambridge Mathematics: #1 of 52,000 candidates worldwide; 200/200

May 2021

SAT: 1570 (800 Math, 770 English); >99th percentile **Cambridge IGCSE**: 11 A* (all 11 subjects)

2022 – 2024

EDUCATION

NUS School of Computing

Aug 2026 – May 2030 (expected)

B.Comp. in Computer Science

Singapore

NPS International School

Aug 2022 – May 2024

IB Diploma: 44/45 (Top <1% globally)

Singapore

SKILLS

ML: PyTorch, TensorFlow, scikit-learn, PEFT fine-tuning, RAG, Gaussian Splatting

Agents: Claude Agent SDK, OpenAI SDK, LangGraph, MCP, tool calling, structured outputs

Languages: Python, Swift, Kotlin, C/C++, JavaScript, SQL

Full-Stack: React, FastAPI, PostgreSQL, AWS (Lambda, S3, Textract), Docker, Fly.io

Mobile: SwiftUI, PushKit/CallKit, Jetpack Compose **Spoken**: English, Hindi, Marathi, Mandarin Chinese