ADVAIT BAGRI

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Singapore Citizen eligible for 12-month J-1 US visa sponsored by NUS and hosted by Stanford University

EDUCATION

National University of Singapore **Aug 2025 - Aug 2028**
Bachelor of Engineering in Computer Engineering

- Honours (Highest Distinction); 4.84/5.00 GPA; IEEE-HKN Lambda-Omega Chapter Member
- Founder @ The Collective, Project Director @ NUS MedTech, President @ OrcaStrats

WORK EXPERIENCE

AI Engineering Intern, Reliance Jio **May 2026 - Jul 2026**

- Architected and built a full-stack integrated release-management portal (React, TypeScript, Vite, Hono, SQLite), eliminating excessive cross-platform dependencies
- Shipped an AI assistant agent embedded in the release workflow and deployed as a Databricks App, cutting manual validation and form-filling time by an estimated 70% in pilot tests

Founder and CEO, The45ers **Sept 2024 - Dec 2025**

- Founded and scaled an IB tutoring platform to 100+ students across 20+ subjects, driving growth through algorithmic tutor matching and AI-assisted content validation

Automation Intern, Wavescan Technologies **Jun 2022 - Jul 2022**

- Programmed Raspberry Pi and Arduino microcontrollers to test and calibrate an imaging sensor
- Applied RF signal processing pipelines using heterodyne down-conversion and I/Q demodulation

TECHNICAL PROJECTS

FlashCLI - Centralised Revision Interface **Mar 2026 - May 2026**

- Coded a Java CLI productivity app that centralises flashcards and revision tracking across subjects
- Added defensive programming practices using assertions and logging, and maintained JUnit test suites

Alex - Search and Rescue Robot **Feb 2026 - Apr 2026**

- Built a TLS-encrypted client-server architecture for a robot, relaying commands and telemetry between a Raspberry Pi and an Arduino, with a remote terminal issuing control commands via a CLI
- Implemented real-time LiDAR-based SLAM for autonomous mapping

Snap Steady - Parkinson's Tremor Stabiliser **Sept 2025 - Nov 2025**

- Engineered a self-stabilising assistive device for Parkinson's patients using an ESP32 and MPU6050 IMU
- Implemented real-time corrective motion using sensor fusion and developed a tremor classification pipeline

mBot - Robot Navigator **Sept 2025 - Nov 2025**

- Engineered an autonomous maze-navigation robot using IR proximity, ultrasonic and colour sensors for real-time collision avoidance and dynamic navigation logic
- Optimised path-planning and PID algorithms to achieve 1st place out of 50+ teams on completion time

Project 0 - Hydroponic System **Aug 2021 - May 2023**

- Secured a $1,000 grant to design a modular, low-cost hydroponic system built from recycled materials
- Applied optimisation and evolutionary algorithms to improve system efficiency under spatial constraints

EXTRACURRICULAR ACTIVITIES

Candidate Master and National Representative of Singapore, Chess **Jun 2016 - Present**

- Represented Singapore as part of the 2020 Chess Olympiad Team
- Won two National Age Group Championships and secured 3rd place at the World U13 Championship

Lead Author, Research **Oct 2023 - Oct 2024**

- Authored research paper analysing economic and environmental impact of Tengeh floating photovoltaic farm using PVGIS-ERA5 irradiance data and present-worth financial modelling
- Published in Intersect: The Stanford Journal of Science, Technology, and Society Vol.18 No.3

ADDITIONAL INFORMATION

Technical Skills: C, C++, Java, Python, Verilog, Assembly, FreeRTOS, MATLAB, SQL, Altium Design
Hardware & Embedded: Arduino, Raspberry Pi, ESP32, STM32
Languages: English, Hindi, Chinese
Interests: Chess, Reading, Travelling, Guitar, Hiking