

# BALAJI ADITHYA NARAYANAN

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## EDUCATION

**Imperial College London** Oct. 2023 - June 2026 (*Expected*), London, England  
BEng Joint Mathematics and Computer Science - Year 1 grade: *First Class Honours*

**International Baccalaureate Diploma** Aug. 2020 - May 2022, *Singapore*

**Total Score: 44/45** – *Ranked top 1.6% worldwide.*

## EXPERIENCE

**Software Engineer Intern - Stealth, Under NDA** Aug. 2024 - Present, *San Francisco, United States (Remote)*  
Collaborating with Jeff Wilson, former Harvard PostDoc & Fellow, 2-time Y Combinator Alum, and ex-Professor/Dean.

**Technology and Investment Intern - Tristar Investment Management** Jul. 2023 - Sep. 2023, *Singapore*

Tristar is a Single Family Office set up by Indonesian UHNWIs with USD 700M in AUM.

- Reduced monthly report production times by 90% by automating processing of Position and Cash Flow Statements for USD 700M in assets using Python, OpenAI APIs, Openpyxl, Pandas and implemented transaction type detection capabilities for purchases, divestments, capital calls, distributions, and fees across all statements.
- Improved data-driven decision-making for bond allocations by analyzing the fund's USD 180M fixed income portfolio, which informed investment strategy presentations to the principal.
- Accelerated deployment of the Bloomberg PORT Enterprise by 2 months by developing custom scripts to port 1.5 years of data to the platform.
- Reduced report production times for given ticker codes by 80% and improved quality of analysis of reports by developing automated market analysis systems using Interactive Brokers API, LlamaIndex, LangChain, and OpenAI APIs.

**Software Engineer Intern - Tagit Technologies** May 2023 - June 2023, *Singapore*

Tagit is a fintech startup creating digital banking products. Developed solutions now implemented in applications in use by the Singapore Government and major banks (CitiBank, DBS).

- Improved repeated customer transaction prediction accuracy by developing machine learning models in Elastic Search and Kibana to predict the likelihood of repeated customer transactions to biller codes.
- Enabled the ability to gain insights from app marketplace feedback by creating sentiment analysis tools, leveraging LlamaIndex, LangChain, and OpenAI APIs.
- Enabled natural language querying of proprietary user documentation by developing custom query models.

**Software Engineer Intern - Campus.ai** Apr. 2023 - May 2023, *Singapore*

Campus.ai is a generative AI startup, developing data science content for leading educational institutions.

- Developed a prototype system enabling university lecturers to automatically generate student labs for over 20 machine learning and deep learning model architectures, cutting manual prep time by 60%, utilizing TensorFlow, Hugging Face models, OpenAI APIs, and OpenRouter.
- Collaborated with professors from the Indian Institute of Technology and BITS Pilani to gather feedback and implement enhancements to the automated notebook generation process.

## PROJECTS

**Terra Aim - Runner-up (Terra API category)** at IC Hack 24 | *Python, OpenCV, Unity, Flask, SQL, ESP32* Feb. 2024

Designed a prototype weapons aim training system, integrating health metrics and performance feedback.

- Implemented motion tracking using an ESP32 microcontroller for gyroscopic data and OpenCV with an iPhone camera for positional data of a 3D-printed prop gun.
- Developed a backend using Flask and SQL to process sensor data and determine target hits in a Unity-based frontend application.
- Integrated Terra API to incorporate real-time health metrics for comprehensive user feedback.

**Investigation into the Inception-v1 CNN architecture** | *Python, TensorFlow, Keras, CUDA* 2022

A project based on the GoogLeNet CNN and “Going Deeper With Convolutions” by Szegedy et al.

- Tested 200+ different configurations of the Inception-v1 module to optimize for training time and accuracy, extending past configurations tested in the original implementation.
- Tested hundreds of additional configurations of subsampling stride and number of unique convolutions per module.

**AArch64 Emulator and Assembler** | *C, Assembly, Raspberry Pi* 2024

- Developed emulator and assembler for AArch64 in C to run on a Raspberry Pi
- Developed script to control an LED via GPIO in assembly

## SOCIETIES

**Sponsor Liaison and Industrial Events Coordinator - Department of Computing Society** Jun. 2024 - Present

Elected by computing department students to manage sponsor relationships for Europe's highest-funded student society. Successfully secured over £180,000 in sponsorships and responsible for IC Hack 25 sponsorships.

**Member - Beta Sigma Society** Feb. 2024 - Present

Selected member of Quantitative Finance society - Beta Sigma. Invited to a masterclass at Optiver's London offices as a member.

**Technical Director - Google Developer Student Clubs Imperial** Aug. 2024 - Present

Responsible for organizing and leading technical workshops, collaborative projects, and showcasing new technologies.

**Co-Lead - [craft]** Sep. 2023 - Present

Co-lead of an initiative sponsored by Entrepreneurship First, affiliated with [scale down] (Cambridge), [orchard] (Oxford). Organized a major event at Entrepreneurship First HQ, attracting 100+ students from Cambridge, Oxford, and Imperial.

## SKILLS

- **Programming Languages:** *Proficient* - Python, Java, Kotlin. *Familiar* - Haskell, C.
- **Technologies/Libraries:** TensorFlow, Keras, Pandas, OpenCV, NumPy, SciPy, OpenAI APIs, LlamaIndex, LangChain, JUnit,  $\LaTeX$ , Git, GitHub, GitLab, Hugging Face.