

Akarsh Bharadwaj Gopalam

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Education

Imperial College London

Sept 2023 - June 2027

Electronic and Information Engineering MEng

- Predicted Upper Second Class Honours (2:1).

Orleans Park School Sixth Form

Sept 2021 - August 2023

- A-levels in Mathematics (A*), Further Mathematics (A*), Physics (A*).
- Won multiple subject awards for excellence during Year 12 and 13, including 2023 Physics prize winner.

Professional Experience

OncoFlow

July 2025 - August 2025

Incoming Software Engineering Intern

- Joining OncoFlow (an oncology focused AI startup) on an 8 week internship, working with full stack and AI model development

British Petroleum (BP) Digital Science Sector

June 2024

Insight

- Attended meetings with the Digital Science team, exploring topics such as embodied AI and deep learning.
- Designed a WeBots C++ project using an e-puck, utilizing its 8 distance sensors, ensuring no collisions.
- Presented my WeBots project via PowerPoint to the principal of Digital Science, receiving positive feedback.

BAE Systems

July 2022

Engineering Taster Week

- Had the opportunity to explore how upcoming technology is utilized in various sectors within BAE.
- Created a Python program to choose a base from a selection of 15 along a 2,000km² shoreline to deploy from based on distance from the desired target.

Personal Projects

Money Savings Goal Planner

Next.js, Python FastAPI, PostgreSQL

- Designed an app that allows users to set savings goals and update their savings progress.
- Developed the frontend using TypeScript, Next.js and Tailwind CSS, incorporating features such as allowing users to enter a 'reason' for their savings and 'amount saved so far' to display their progress.
- Utilized Next.js App routing to allow users to access further details for each goal.
- Used Python FastAPI on the backend to communicate and store information in a PostgreSQL database.

Job Application Tracker

React, Node.js, MongoDB, Express.js

- Utilized React, JavaScript and Tailwind CSS, enabling users to manage applications.
- Developed the backend using Express.js and MongoDB, supporting full CRUD via RESTful APIs.

RISC V-32I Processor

SystemVerilog, C++, Git

- Collaborated in a team of 4 to design a RISC V-32I processor from scratch in SystemVerilog, further developing a pipelined processor with two way set associative cache and achieving a First Class Honors.
- Designed and implemented the data memory module within the processor and wrote GTests in C++ to verify the functionality of the component.
- Created a testbench using C++ to assess the processor's ability to plot a probability generating function given a dataset, optimizing for improved plotting speed.

Technical Skills

- **Languages:** C++, Python, SystemVerilog, JavaScript/TypeScript, HTML, Tailwind CSS.
- **Frameworks/Libraries:** React, Next.js, Express.js, FastAPI, NumPy, Pandas.
- **Tools & Technologies:** Git, VS Code, MongoDB, PostgreSQL, SQLite, AWS EC2, LaTeX.