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Shaan (Aasmaan) Yadav

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Education

Duke University   Expected May 2026
BSE: *Double major in **Electrical and Computer Engineering** & **Computer Science***   *Durham, NC, USA*
4.0 GPA | *Dean's List with Distinction | Catalyst Tech Pre-Professional Society*

Eton College   September 2017 – June 2022
4.0 GPA *(all A* grades) | Oppidan (Academic) Scholarship | House Captain | President of Scientific Society*   *Windsor, Berkshire, UK*

Technical Skills

Languages – Python, Java, C/C++, Javascript, HTML/CSS, Swift, Dart

Hardware – C/C++, Verilog, MIPS (Assembly Code), Logisim, Arduino, Finite State Machines

Technologies – Github, PyTorch, React, Flutter, Firebase, Linux, Shell, HPC Computing, CAD (Fusion360)

Experience

Duke Electrical & Computer Engineering   December 2023 – Present
Teaching Assistant   *Duke University, NC, USA*

- Teaching Assistant for ECE 110 with Professor S Daily - Fundamentals of Electrical and Computer Engineering
- Hold office hours, grade all quizzes and exams, assist with lectures

Duke Singh Research Lab   September 2023 – Present
Student Researcher   *Duke University, NC, USA*

- Conducting research under Dr Rohit Singh at the Singhlab at Duke (https://singhlab.net) about **machine learning models for better drug development**
- Developing the **ConPLex deep learning protein language model**, improving its accuracy by training it on the LIT-PCBA proteins dataset to improve the 1-shot prediction capabilities on unseen rare genetic diseases

Raiz Vertical Farms   June 2023 – August 2023
Software Engineering Intern   *Lisbon, Portugal*

- **Collaborated directly with CTO** to convert applications (a platform for farm resource management and allocation and models to optimise hydroponics) from **prototype to production stage**
- Transferred app from **obsolete technologies to Mantine v7**, hosting on fly.io with staging and production environments; Connected environments to postgres SQL database; Refactored old React code into new environments

Palantir   July 2022
Data Analyst Intern   *London, UK*

- **Analysed and extrapolated raw, incomplete UK wildfire data** (using Palantir's Foundry platform) to **provide data-backed insights for the UK fire department** to most effectively distribute resources to combat unexpected wildfires

Projects

Solar Panel Efficiency Optimization Through Image Capture   August 2022 – December 2022
Hardware Engineer   *Duke University, NC, USA*

- Communicated with client to deliver a **low-cost, simple Arduino device** to store high-resolution pictures at specified intervals
- Captured images of dust levels for analysis to **optimize solar panel cleaning schedules and maximize solar efficiency**
- Contributed to and delegated tasks regarding technical memos, presentations, and an academic poster as a team

MelanomaScan   September 2021 – March 2022
Developer   *Eton College, Windsor, UK*

- **Developed iOS app to diagnose skin cancer using iphone cameras**, and provide location and person specific cancer risk
- Full Stack development using OOP with Swift and XCode, created a user-friendly app utilising Convolutional Neural Networks, GPS & Camera hardware, API calls, Data cleaning & management
- **Project demo:** https://shaan106.github.io/projects/project_melanoma_scan.html

TeensInAI   March 2020 – January 2022
Course Developer and Teacher   *London, UK*

- Hired by TeensInAI to **develop and teach a course as an introduction to machine learning for teens**
- **Taught course to ~200 students;** 60 students at a TeensInAI hackathon, 30 at Eton, and 100 more through recorded content
- Link to content: https://youtube.com/playlist?list=PLhH6nWDpggsH5EI8oKAXosorKVcH59tbE