

# Ayaz Baig

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## PROFILE

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Driven and enthusiastic final-year MEng Computer Science student at the University of Southampton on track to graduate with First Class Honours. Specializing in Machine Learning, Mobile App Development, and Web Development, I bring a wealth of practical experience and a strong academic background. My passion for technology drives me to excel in developing innovative solutions, demonstrated through my successful projects in mobile application development and research initiatives in Machine Learning.

## EDUCATION

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### University of Southampton, UK

2021 – Expected 2025

#### MEng Computer Science

- **Key Modules:** Machine Learning Technologies, Algorithmics, Programming Concepts, Cloud Development, Foundations of Computer Science, Natural Language Processing
- On track to graduate with First Class Honours, 78% average in first year, 72% average in second year and 73% average in third year
- Event organiser for **Southampton Google Developer Group (GDG)**, working alongside talented individuals to host events based on several fields in technology, including **Cloud computing, Machine Learning and Cyber security**

### Ernest Bevin College

2014 – 2021

#### A-levels & GCSEs

- **A-levels:** Mathematics **A\***, Computer Science **A\***, Further Mathematics **A\***, Physics **A\***
- **GCSEs:** 6 grade 9's, 3 grade 8's, 1 grade 7 - Grade 9 in Maths, Computer Science and the 3 sciences

## EXPERIENCE

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### App Developer Intern

FEBRUARY 2024 – AUGUST 2024

#### University of Southampton

- Designing and developing a mobile application to improve routing for electric vehicle users
- Working alongside research fellows as part of the University's **Citizen Centric Artificial Intelligence Systems** (CCAIS - <https://www.ccais.ac.uk/>) project, to utilize AI in helping adopt cleaner tech
- Developed a mobile application using **Flutter** for cross-platform use, alongside a **Django REST API** framework backend to communicate with the routing algorithm
- Assisted backend development using a **PostgreSQL database** to store routing data, linked with the REST API using **database queries**
- Designed a modern, intuitive UI using **Figma** following **Google Material** design

### App Developer Intern

AUGUST 2023 – FEBRUARY 2024

#### ARM Environments Ltd

*Indoor Air Quality & Ventilation compliance consultancy company based in Salisbury*

- Lead the development of a fully functioning cross-platform mobile application using **Flutter** and **Google Cloud** backend functions
- Designed a modern mobile UI using **Figma** based on client requirements, alongside an **Agile** development approach
- Integrated several cloud technologies including **Google Firebase** and **Cloud Functions**, to serve as a backend for the application
- Collaborated with several large Air Quality monitor manufacturers to integrate their **REST APIs** within the app

*Startup founded by students at various universities creating mobile technologies to support students*

- Engineered and designed new features for an intuitive mobile application using **Flutter** alongside **Google Cloud & Firebase** to create a popular application compatible on **iOS** and **Android**, used by students worldwide
- Took charge and collaborated with a group of developers across the world to release vital major updates which have majorly increased the userbase and user retention
- Released major updates to take the app to the **top 5%** of the Education category on the Apple App Store and the Google Play Store, with **over 100,000** combined downloads

## PROJECTS AND INTERESTS

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### Dementia Diagnosis Machine Learning Research Project

- As part of my third year Computer Science project, I aimed to bridge the gap in research on effective methods of diagnosis for dementia using **multi-modal clinical** and **imaging data**
- Implemented several **machine learning** and **deep learning models** to predict progression of dementia using **2D and 3D neuroimaging** alongside brain inflammation marker datasets
- Utilised modern deep learning models including **ResNet** and **DenseNet**, with various **pre-processing** and **augmentation techniques** to improve results
- Performed in-depth research on dementia, it's aetiology and cutting-edge forms of diagnosis to further my results and introduce relevant medical backing
- Achieved a grade of **70%**

### Startup Software Consulting

- Founded **software solutions and consultation** company with peers to provide software solutions for clients, ranging from **web and app development** to custom **AI services**.
- Main work so far has been full-scale websites and mobile apps utilising several modern frameworks, such as **React**, **Next.js** and **Flutter**.
- Established a **lead position**, working alongside peers to delegate tasks and undertake development in an **agile manner**, outside of studies.
- Produced high quality work based on client requirements, with frequent meetings to ensure constant feedback, alongside developing modern **UI mockups** with **Figma**.

## SKILLS

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| • Experienced with Flutter and cross-platform mobile development              | • Experienced with Web Development using React, Node.js and CSS |
| • Proficient in Python, Java and JavaScript                                   | • Proficient at UI design with Figma                            |
| • Experienced with Cloud technologies, such as Azure, Firebase & Google Cloud | • Knowledge of Haskell and functional programming               |
| • Knowledge of SQL and database programming                                   | • Intermediate with C/C++                                       |

## REFERENCES

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Sebastian Stein, Professor of Electronics & Computer Science at University of Southampton

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Alex Wilkinson, Chief Operating Officer at ARM Environments Ltd

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