

Ayaz Baig

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PROFILE

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

University of Southampton, UK

2021 – PRESENT

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 and 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

Mobile Developer Research Intern
University of Southampton

FEBRUARY 2024 – AUGUST 2024

- Designed and developed 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
ARM Environments Ltd

AUGUST 2023 – FEBRUARY 2024

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

Software Developer
Principal Technologies Ltd

OCTOBER 2022 – OCTOBER 2023

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

PROJECTS AND INTERESTS

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, with SwiftUI and Kotlin | • Experienced with Web Development using React, Node.js, Next.js and CSS |
| • Advanced 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

Sebastian Stein, Professor of Electronics & Computer Science at University of Southampton
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Alex Wilkinson, Chief Operating Officer at ARM Environments Ltd
Email: alex@arm-environments.com