

Faran Zafar

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PERSONAL PROFILE

I am a Computer Science graduate with a Bachelor's degree, possessing a strong passion and deep-rooted interest in Artificial Intelligence and Software Development. My professional journey is marked by significant experiences in the AI and development domain, ranging from cutting-edge research to the development of real-world applications.

EDUCATION

Aston University

BSc in Computer Science

Birmingham, UK

Sept 2021 – Sept 2024

- Obtained Grade: First Class Honours
- Distinction in the following courses:
 - DSA in Java, Object Oriented Programming, Computer Systems, Artificial Intelligence, Data Mining, Game Development, Information Security, Software Project Management, Secure Network Services

SKILLS & CERTIFICATIONS

Tools: NumPy, Pandas, SQL, Spring Boot, React, Laravel, Django, Flask, SpaCy, Keras, Wireshark, Linux/Ubuntu, Streamlit, Matplotlib, Unity Netcode, Backendless, Unity, PyTorch, Flask Pinecone, LangChain, MS Office, PostgreSQL, Git (Version Control)

Programming languages: Python, Java, PHP, JavaScript, C#, HTML, CSS, C(learning)

Integrated Development Environment (IDE): IntelliJ IDEA, Visual Studio, Eclipse, PyCharm, Android Studio

Certifications: Cybersecurity Professional Certificate (Google)

WORK EXPERIENCE

School of Coding and AI

Lecturer

Birmingham, UK

Jan 2024 – Present

- Taught Python and Java, making complex topics accessible using techniques such as analogies and hands-on exercises.
- Developed engaging programming content in the form of small coding tasks and gaming exercises.
- Tailored support to individual student needs by taking regular feedbacks and adjusting the pace and complexity of the lectures.

Google DeepMind

Research Intern

Birmingham, UK

July 2024 – Aug 2024

- Collaborated with a team to develop the Adaptive Memory RAG (AMRAG) framework, integrating self-checks and web search, leading to an 88% improvement in response accuracy.
- Applied advanced techniques such as decomposition, QA context generation, hallucination detection, and retrieval augmentation.
- Achieved sub-5-second response times, significantly enhancing performance over standard RAG models.

Aston University

Teaching Assistant for College of Engineering and Physical Sciences

Birmingham, UK

Oct 2023 – July 2024

- I clarified OOP concepts such as encapsulation, polymorphism, bridging theory with hands-on practice.
- Instructed and assisted students in understanding core Data Structures and Algorithms (DSA) concepts, including sorting, searching, and dynamic programming, through practical coding exercises and interactive problem-solving sessions
- Mentored 10+ student teams of 6 members in OOP, emphasizing best practices.
- Reviewed student codes for efficiency, offering face-to-face feedback.

- Partnered with the lead instructor for lesson planning by planning class activities.
- Led 8+ hands-on workshops on advanced OOP topics with students ranging from 30 to 50 in each workshop.

LEADERSHIP EXPERIENCE

Aston Computer Science Society

Treasurer

Birmingham, UK

Nov 2022 – June 2023

- I oversaw finances and event planning as Treasurer of the Aston Computer Science Society, enhancing operational efficiency by reducing expenses by 10%, thus resulting in 5% more events per semester.

Aston Health Innovation

Leader/Runner Up

Birmingham, UK

Nov 2023 – Nov 2023

- I lead team of the startup InstaMDAI, developing an AI-based solution to reduce NHS queue times by prioritizing critical cases and optimizing doctor allocation.

Aston Mentorship Program

Mentor

Birmingham, UK

Dec 2022 – June 2023

- I mentored 8 students who studied a year prior to me, helping them with their studies and guiding them through the course and their projects. I assisted them in developing time management skills and offered exam preparation support.

Aston Hackathon

Organiser

Birmingham, UK

Dec 2022 – Dec 2022

- I was leading member of the team and organised the 2022 Aston Hackathon with nearly 100 participants over the span of two days, coordinating all events with a team to ensure timely execution.

PROJECTS (More Projects available on my website: faranzz.com)

Litigat8

NLP/AI Project

Oct 2023 – Feb 2024

- Utilised NLTK and SpaCy for NLP, enhancing legal language processing in the chatbot.
- Trained GPT and BERT models with TensorFlow and PyTorch, boosting chatbot accuracy.
- Developed Flask backend for efficient chatbot operation and user interaction.
- Employed Pandas, NumPy, and Scikit-learn for streamlined data handling in model training.
- Implemented RESTful APIs for easy chatbot integration.

KingsMen

Java/Spring Boot Project

Jan 2024 – Feb 2024

- Developed a secure web application using Java and Spring Boot.
- Implemented authentication and authorization with Spring Security, JWT tokens, and role-based access control.
- Built RESTful APIs and integrated OAuth 2.0 for third-party authentication.
- Applied database encryption and hashing algorithms for data protection.

Neuroevolution in Robotics

Research Project

Oct 2022 – November 2022

- Explored NEAT and HyperNEAT algorithms in Robotics.
- Analysed their impact on computational efficiency and adaptability.
- Highlighted the significance of evolving both topology and weights.
- Identified recent innovations in neuroevolution algorithms for robotics.