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 domain, ranging from cutting-edge research to the development of real-world applications.

EDUCATION

Aston University   *Birmingham, UK*
BSc in Computer Science   *Sept 2021 – Sept 2024*
- Obtained Grade: First Class Honours
- Distinction in the following courses:
    o DSA in Java, Object Oriented Programming, Computer Systems, Artificial Intelligence, Data Mining, Game Development, Information Security, Software Project Management

SKILLS & CERTIFICATIONS

Tools: NumPy, Pandas, SQL, Spring Boot, React, Laravel, Django, Flask, SpaCy, Keras, Wireshark, Firebase, Linux/Ubuntu, Streamlit, Matplotlib, Unity, PyTorch, Flask, Pinecone, LangChain, MS Office, PostgreSQL, Git (Version Control)
Programming languages: Python, Java, PHP, JavaScript, C#, HTML, CSS, C(learning), Tailwind CSS
Integrated Development Environment (IDE): IntelliJ IDEA, Visual Studio, Eclipse, PyCharm, Android Studio
Certifications: Cybersecurity Professional Certificate (Google)

WORK EXPERIENCE

Google DeepMind   *Birmingham, UK*
Research Intern   *July 2024 – Present*
- 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   *Birmingham, UK*
Teaching Assistant for College of Engineering and Physical Sciences   *Oct 2023 – Present*
- 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.

School of Coding and AI   *Birmingham, UK*
Lecturer   *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.

LEADERSHIP EXPERIENCE

Aston Computer Science Society   *Birmingham, UK*
Treasurer   *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   *Birmingham, UK*
Leader/Runner Up   *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   *Birmingham, UK*
Mentor   *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   *Birmingham, UK*
Organiser   *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   *Oct 2023 – Present*
NLP/AI Project
- 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.

AI Stock Market Predictor   *Jan 2024 – Feb 2024*
ML Project
- Engineered a stock market predictor with Keras and LSTM model, achieving 96.3% accuracy in variance detection.
- Leveraged Pandas and NumPy for efficient data manipulation and preprocessing.
- Utilized Matplotlib for creating insightful visualizations of stock trends, aiding in model evaluation.
- Implemented the application interface with Streamlit, enhancing user interaction

Neuroevolution in Robotics   *Oct 2022 – November 2022*
Research Project
- 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.

INTERESTS

Gym, Dancing, Coding, Video Games (My current favourite is Valorant), Self-help Books and Socialising.