SAAD BASHIR

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SUMMARY

A Machine Learning Engineer with a PhD in Computer Science with 4+ years of experience developing and implementing advanced AI algorithms. Skilled in deep learning, computer vision, and medical imaging, as well as proficiency in PyTorch, TensorFlow, Python, and Java languages. Successfully delivered 5+ projects from inception to production in both academic and industrial settings.

EXPERIENCE

Research Assistant

Tissue Image Analytics (TIA) Centre, Warwick — Dec 2022 – Current

- Designed and built graph neural networks (GNNs) for exploring new digital diagnostic and prognostic biomarkers in oral epithelial dysplasia (OED), boosting accuracy by 10%.
- Developed deep learning frameworks for medical image analysis using PyTorch and TensorFlow and leveraged NumPy, Scikit-learn, Pandas for data preprocessing and analysis, resulted in improved model accuracy by 5-10% in multiple projects.
- Performed research on the effectiveness of newly discovered biomarkers in clinical settings; published findings in peer-reviewed medical journals.

Software Engineer

devFactory Aurea, Remote — Jan 2018 to July 2018

- Optimised and maintained multiple projects by enhancing their functionality and fixing complex bugs in the existing workflows using Java; reduced manual inspection of code saving up to 5+ hours per week with automated tests.
- Executed automated test cases using JUnit and Selenium, increasing the overall code coverage for test cases up to 95%.
- Integrated changes on Docker, Jenkins, GitHub, and AWS, ensuring seamless functionality of the existing system.

Research Assistant

Computer Vision Lab, SEECS NUST — June 2017 – June 2018

- Built an unsupervised framework using convolutional neural networks (CNN) for intelligent surveillance of vehicle re-identification, alleviating the need for annotated data and resulting performance increase of 5-10%.
- Created a reliable real-time pothole detection and classification system using mobile motion sensors with 0 latency. The system demonstrated accuracy and efficiency, enabling faster identification and resolution of road hazards to improve overall safety and reduce vehicle damage.
- Implemented and optimized machine/deep learning server infrastructure, including installation and configuration of hardware and software components, to ensure reliable and efficient operation for data-intensive workloads saving 3-5 hours per day.

Software Engineer

Planet Beyond, Blue Area, Islamabad — Dec 2014 to Mar 2017

- Implemented high-throughput value added services (VAS) for multiple telecom operators, resulting in increased revenue and customer satisfaction.
- Oversaw the software development lifecycle of VAS services and mobile apps, for timely and efficient delivery of critical projects.

- Employed Java Core, SQL, HTML, Spring, Hibernate, Angular, and Python with Maven and Gradle for design, development, testing and deployment of VAS applications.

EDUCATION

PhD

University of Warwick, Computer Science June 2019 - June 2023

- Formulated weakly-, semi-, and unsupervised deep learning based pipelines and frameworks for optimised performance and digital biomarker discovery in giga-pixel image diagnosis and prognosis.
- Collaborated with a team of medical researchers to design and execute a comprehensive study on the clinical impact of the trained models; presented findings at international medical conferences.
- Supervised computational pathology, computer graphics and programming fundamental labs for graduates and undergraduates.

HONOURS

Chancellor's Scholarship – University of Warwick Mar 2019

Silver Medal – Arid Agriculture University May 2015