

Bilal Saleem

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SUMMARY

I am a team player with a strong work ethic and a desire to solve challenging real-world problems. Currently seeking roles in Software Engineering, Machine Learning Engineering, RL and Data Science.

WORK EXPERIENCE

IBM Software Engineer

06/2022 - 09/2024

Collaborated with IBM Research team to investigate media bias in film using NLP contributing to the advancement of Tech4Justice and its mission. Implemented StanfordCoreNLP library to classify for scripts using descriptors.

IBM Graduate Consultant

06/2021 - 09/2022

Developed proof-of-concepts for Government clients ranging from performance testing to Red Hat Cloud deployments

Northrop Grumman - Graduate Software Engineer

Oct 2019 - Oct 2020

Collaborated with software team to resolve C++ bugs in the flagship radio product, improving overall functionality.

Freelance - Data Scientist

2024

Engineered end-to-end ML pipeline for tennis match prediction: feature engineering (15+ metrics), XG-Boost model, FastAPI serving layer, deployed on AWS Lambda, CloudWatch monitoring”

PROJECTS

MSc Thesis - Reinforcement Learning for Ship Routing Optimisation

Implemented DDQN and DDPG for maritime route optimisation. Developed parallelised multi-resolution grid that reduced training times to minutes.

Image Processing Library

Led a 7 person team to develop 2D/3D image library using C++/CMake

Automatic Speech Recognition App

Working on an automatic speech recognition and voice chat assistant app, educating myself on finetuning, deploying and evaluating generative models.

EDUCATION

2024 - 2025 MSc Computational Science [Home Student Scholarship] **Imperial College London**

2014 - 2019 MEng Mechatronics and Robotics [Placement Year] at **University of Leeds** (2:1)

SKILLS

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|----------------|---|
| ML Engineering | PyTorch, scikit-learn, Hugging Face, Model Deployment, FastAPI |
| MLOps & DevOps | Docker, AWS(ECS, Lambda, EC2, S3), CI/CD (GitHub Actions), Weights & Biases |
| Data & Backend | Python, pandas, numpy, SQL, PostgreSQL, FastAPI |
| Frontend | Next.js, React, TypeScript, |
| C++ | STL, openMP, CMake |