PERSONAL INFORMATION

Faiz Muhammad

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WORK EXPERIENCE

October 2022 to Present

Machine Learning Engineer

AILiveSim LTD.

- Generated synthetic data resembling real datasets by tweaking parameters in 3D environments.
- Developed an Object Detection model for the Maritime Environment using Synthetic Data.
- Engineered a sophisticated decomposition technique within the ResNet model, focusing on the computation of projection matrices and orthogonal components tailored for PCA analysis.
- Successfully dockerized machine learning inference models for optimal resource utilization and isolation.
- Deployed models as AWS Lambda functions, enabling scalable, serverless execution with reduced operational overhead.

September 2023 to November 2023

Teaching Assistant

Introduction to Pattern Recognition and Machine Learning Course at Tampere University

- Conducted regular weekly sessions focused on assisting students with assignments in key areas such as neural networks, decision trees, Bayesian learning, and reinforcement learning.
- Responsible for evaluating and grading student assignments, providing constructive feedback to support their learning and understanding of complex machine learning concepts.

February 2023 to October 2023

Machine Learning Researcher

Amplon Oy.

- Using natural language processing (NLP) to enhance the business objectives defined by the clients in Amplon's Hoshin Kanri software.
- Developed and deployed a REST API that suggests improvements in business objectives on Google Cloud Run.

November 2021 to October 2022

Machine Learning Engineer

LADAR Ltd.

- Explored open-source libraries, such as BlenderProc for RGB and Depth image segmentation.
- Developed a system to detect motion in live camera feed and save frames that have valuable information.
- Modified YoloV5 model to train on 5 channels: RGB + Lidar (Depth) + Infrared (IR) (this feature fusion resulted in higher precision and recall on the validation set.
- Developed a data visualization interface using Dash to display model results.
- Set up the environment to collect visual and thermal data from IP cameras installed in Oslo, Norway.

October 2020 to November 2021

Project Analyst

Offshore Navigation Ltd.

- Worked on multiple sub-projects including optimization of VoyOpt, a sail planning system and implementation and integration of APIs to obtain positional information of ships across the world.
- Provided support in devising strategies in close liaison with the Machine Learning team to improve the accuracy of weather data.

May 2020 to August 2020

Data Science Intern

Offshore Navigation Ltd.

- Worked on geospatial data wrangling and analysis.
- Explored various Python libraries, such as Xarrays and NetCDF4.
- Analysed heat maps of vessel positions on Marine Traffic.

January 2020 to July 2020

Teaching Assistant

Artificial Intelligence Course (CS-401) at FAST-NU

- Conducted TA sessions to discuss and resolve course related ambiguities with student

June 2019 to August 2019

Deep Learning Intern

Agriasan Ltd.

- Trained deep learning models on the wheat corpus to detect diseases.
- Used Keras' augmentation techniques on the data and hyper-parameter tuning of the parameters.

June 2018 to August 2018

Software Integration Development Intern

Afiniti Ltd.

- Developed an index parser for artificially intelligent paired call log files.
- Worked with C# and MySQL to develop two desktop applications for Afiniti's Software Integration Team.

EDUCATION AND TRAINING

August 2022 to Present

MS Data Science

TAMPERE UNIVERSITY, TAMPERE, FINLAND.

- **GPA:** 4.72/5.00
- **Major Courses:** Statistical Methods for Text Data Analysis, Pattern Recognition and Machine Learning, Recommender Systems, Data-Driven Programming, Image and Video Processing, Statistical Inference, Bayesian Analysis

August 2016 to June 2020

BS Computer Science

NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES, LAHORE, PAKISTAN.

- **GPA:** 3.52/4.00
- **Major Courses:** Data Science, Computer Vision, Deep Learning, Digital Image Pro Machine Learning, Artificial Intelligence, Information Retrieval, NLP, Data Structures, Algorithms
- **Publication: "*Skin Burn Segmentation using Deep Learning*"**. Trained multiple deep learning models such as UNET and MASK R-CNN on custom skin burn dataset collected from Jinnah hospital.

PERSONAL SKILLS

Computer Skills

Beginner	Intermediate	Advanced
C++, C#, R, MySQL	Tensorflow, NLTK, AWS	Python, Pytorch, OpenCV, MATLAB, SQL