

Mirza Elaaf Shuja

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TECHNICAL SKILLS

Languages:	Python, C, C++, JavaScript, SQL, Shell Scripting
Platforms:	Linux, Google Cloud Platform, Microsoft Azure
Tools:	Git, Jira, GitHub, Docker, Hadoop, Spark, Talend, Sqoop, HIVE, Vertica, Hadoop
Philosophies:	Agile Development (Scrum), Test Driven Development

EXPERIENCE

ADDO AI - addo.ai

Lahore Pakistan

Software Engineer - Big Data and Machine Learning

Apr 2019 – Present

- + Analysis of Enterprise Data (Sales) and Insight Reporting
- + Developed POCs for domain specific Machine Learning use-cases (Fraud Detection, Customer Segmentation)
- + Built scalable Machine Learning model training pipelines using Tensorflow and PyTorch
- + Deployed Machine Learning models to production (GCP, Flask)
- + Developed Spark ETL jobs for Data Warehouse Migration from Teradata to Vertica
- + Developed Sqoop jobs for source data loading into Data Lake on HIVE
- + Optimized Spark jobs to reduce job runtime and cluster resources

Information Technology University (ITU) - itu.edu.pk

Lahore Pakistan

Machine Learning Researcher

Sep 2018 – Feb 2020

+ Unsupervised User Stance Detection on Social Media *Natural Language Processing* [Github](#)

Conducted a study of user stance regarding controversial and divisive topics on social media (WhatsApp). Implemented an ICWSM 2020 paper for unsupervised user stance detection on Twitter and attempted to generalize it for semi-closed social networks.

+ Unsupervised Image to Image Translation using Attention guided Cycle GANs *Computer Vision* [Github](#)

Built an Unsupervised Image Gender Swapping system using Attention guided Cycle GANs trained on the CelebA dataset. Architecture based on a NIPS 2018 paper tweaked to fit our use case. Achieved better FID score than baseline CycleGAN.

+ Mis(Informations) Dissemination in semi-closed Social Networks *Natural Language Processing*

Analyzed prevalent MisInformation on WhatsApp and Twitter regarding COVID-19. Statistically differentiated Informative and MisInformative textual content and compared message lifetime across both platforms.

BlueEast - blueeast.com

Lahore Pakistan

Software Engineer - Firmware

Apr 2018 – Sep 2018

- + Development and Testing of Firmware for IOT enabled home appliances
- + Implemented a new firmware extension to store 14 days of IOT sensor data locally using SPIFFS storage on the onboard ESP8266 memory (2-4Mb) via Google's protobuf serialization

EDUCATION

Information Technology University (ITU)

Lahore Pakistan

Masters in Data Science

2018 – 2020

- + Machine Learning Deep Learning Big Data Analytics Computer Vision Information Retrieval and Text Mining Pattern Recognition
- + Offered Graduate Fellowship based on academic performance to top five students (2019-2020)

National University of Sciences and Technology (NUST)

Islamabad Pakistan

Bachelors in Electrical Engineering

2013 – 2017

- + Object Oriented Programming Data Structures and Algorithms Embedded System Design Industrial Process Control

RESEARCH PUBLICATIONS

A First Look at COVID-19 Messages on WhatsApp in Pakistan

Natural Language Processing (NLP), Computational Social Science

A novel study of temporal and statistical properties of prevalent textual and image based information/misinformation in semi-closed social networks (WhatsApp) in Pakistan with collaborators from **MIT**, **QMUL** and **ITU**.

Accepted as a Full Paper at the IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM 2020) December 2020.