# Mirza Elaaf Shuja

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#### Education

# Information Technology University (ITU), Lahore Pakistan

2018 - Present

Masters in Data Sciences

National University of Sciences and Technology (NUST), Islamabad Pakistan

2013 - 2017

Bachelors in Electrical Engineering

#### **Skills**

**Programming:** Python, C/C++, JavaScript.

**Software/Frameworks:** Jupyter Notebooks, Numpy, Sklearn, Pandas, TensorFlow, Pytorch, Hadoop, Spark.

## **Experience**

## **Machine Learning Engineer - ADDO AI**

2019 - Present

Working as a Machine Learning Engineer / Junior Data Scientist to deliver production ready Machine Learning / Al solutions deployed on GCP or AWS.

#### Machine Learning Engineer - DATICS.AI

2018

Worked on Pathfinding algorithms (A\*, JumpPoint etc.) for automated circuit routing on a PCB.

### Firmware Engineer - BlueEast, Orient

2017 - 2018

Worked on the next iteration of firmware for IOT capable appliances produced by Orient Group of Companies. Implemented Local Storage on IOT devices using SPIFFS and Google's Protocol Buffer Serialization.

### **Recent Projects**

### **Unsupervised Attention Guided Image to Image Translation**

2019

Implementing an Attention guided Cycle-GAN to perform image to image translation or Style transfer after training on unpaired image data. [PDF]

## **Emotion Detection from Face Expressions**

2019

Design and train a model to classify Facial Expression of Pakistani Talk Shows into emotions and evaluate the bias introduced by the inherent racial bias of training data. [PDF]

### **Arrhythmia Detection using ECG Classification**

2018

Designed and Trained a Residual CNN to classify ECG waveforms into five different types of arrhythmia using keras with tensorflow backend.

#### **Achievements**

- Studied on Scholarship until Bachelors.
- Bachelors FYP was offered funding by investors to develop a market ready product during SEECS Open House 2017.
- Ran 4 km in 23 minutes.