

# Nouman Ahmed

SOFTWARE ENGINEER · DATA SCIENTIST

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## Education

### Bachelors of Engineering in Software Engineering

Islamabad, Pakistan

NUST (NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY)

Jul. 2016 - Jun. 2020

- **CGPA:** 3.5/4.0
- **Relevant Coursework:** Object Oriented Programming, Data Structures and Algorithms, Software Engineering, Software Construction, Machine Learning, Software Design and Architecture

### Data Scientist Nanodegree

UDACITY - CERTIFICATE

Mar. 2020 - Jun. 2020

- **Relevant Coursework:** Introduction to Data Science, Software Engineering, Data Engineering, Experimental Design and Recommendations

## Work Experience

### Research Assistant

Islamabad, Pakistan

TUCL-NUST, RESEARCH AND DEVELOPMENT CENTRE, SEecs

Jun. 2018 - May. 2020

- Implemented various classic Convolutional Neural networks like LeNet-5, AlexNet, VGG-16 and ResNet-34 using Pytorch. Tested these models on MNIST, FashionMNIST and CIFAR-10 Datasets - [📄 Github](#)
- Worked on Unsupervised Water Body Classification using Deep Learning (Keras and Tensorflow). F1 Score of 85% on classification of water bodies in EuroSAT

### Research Intern

Kaiserslautern, Germany

MICROELECTRONIC SYSTEMS DESIGN RESEARCH GROUP, TECHNISCHE UNIVERSITÄT KAISERSLAUTERN

Jun. 2019 - Sep. 2019

- Worked on a DAAD-funded project titled, 'Forest Monitoring and Change Detection using Remote Sensing Imagery'
- Built an unsupervised pipeline for forest regions binary classification and achieved an f1 score of 91% on the test set of EuroSAT.

## Projects

### Unsupervised Classification of Forest Regions Using Deep Learning (Bachelor Thesis)

- Classified remote sensing forest regions in a progressive unsupervised way due to lack of annotated data.
- Surpassed state-of-the-art unsupervised classification results for classification on Forest regions using satellite imagery.

### Insights from Stackoverflow Developer Survey

[📄 GITHUB](#) | [📄 MEDIUM](#)

- Analyzed Stackoverflow Developer Survey Dataset of past three years using Python's libraries numpy, pandas, matplotlib and scikit-learn
- Analyzed effect of education level on salary, job satisfaction and expected growth of programming languages versus actual

### Web App for Disaster Response

[📄 GITHUB](#) | [📄 MEDIUM](#)

- Analyzed Disaster Response Data from FigureEight to categorize messages related to specific disasters.
- ETL and ML pipelines were built for data loading and classification respectively along with a Flask web app for classification results

### Recommendation Systems for Articles on IBM

[📄 GITHUB](#) | [📄 MEDIUM](#)

- Built various Recommendation Algorithms for recommending articles on the IBM Watson Studio Platform using Python
- Implemented Rank Based, Collaborative Filtering and Matrix Factorization Based Recommendation System for the data

### Website for Coding Challenges in Python

[📄 GITHUB](#)

- An online Python coding challenges platform like Hackerrank
- Used Node.js and React.js for building the backend and frontend respectively along with using MongoDB for database

### Other Projects

- Web Scraping Programs using Selenium and BeautifulSoup - [📄 Github](#)
- Image Captioning on Flickr8k dataset using Keras - [📄 Github](#)

## Skills

### Proficient

Python (pandas, numpy, matplotlib, tensorflow), SQL, Selenium (scraping), Git

### Experienced With

JavaScript, React.js, Node.js, MongoDB, Java, PyTorch, Flask, REST API