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SYED WALEED HYDER

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Karachi

WORK EXPERIENCE

Machine Learning Engineer	**Systems Limited, Karachi**	*August 2020 – Present*

Intelligent Sensor Data Platform. Platform for analysis of data from Patient Wearable Devices
- *Gait Analysis using machine learning (ML) algorithms on time series-data from sensors of Moticon device.*
- *Activity Recognition using ML algorithms on time-series data from accelerometer of Actigraph device.*

Machine Learning Engineer	**IOPTIME, Islamabad**	*June 2020 – July 2020*

NailsRoom. Nails Segmentation in human hands using deep learning
- *Improved the mean IOU score of the by 100% using the existing data. Increased the speed of the model on Android from 10 FPS to 25 FPS. Used the modified U-Net to segment the nails from hands.*
- *Used loss functions to characterize long-tailed distributions since the foreground pixels were dominant.*

Research Intern	**SiPEO, Technical University of Munich, Germany**	*Summer 2019*

Slum mapping in satellite imagery using deep learning
- *Collected the image data on slums for Karachi and Islamabad, filtered the data.*
- *Used the Fully Convolutional Networks (FCN) to segment the slums from non-slums.*
- *Using loss functions to characterize long-tailed distributions since in majority of slum datasets the foreground pixels are dominant.*

Research Assistant	**TUKL-NUST R&D Center, Islamabad**	*Fall 2018*

Real Time Vehicle Detection & Tracking in infrared video-feed
- *Implemented the existing techniques to detect and track the vehicle objects in a non-polarized infrared real time video feed.*

Research & Development Intern	**CVML Lab, NUST, Islamabad**	*Summer 2018*

Vehicle tracking in unconstrained natural scenes using Siamese networks and Kalman Filter
- *Researched and implemented an end-to-end trainable Siamese Network with Kalman Filtering*
- *Deployed it on TensorRT to achieve real time results.*

EDUCATION

Islamabad	**National University of Sciences and Technology (NUST)**	*Sep 2016 – May 2020*

- *Bachelor of Engineering in Software Engineering, CGPA: 3.65, Percentage: 91%*
- **Coursework***: Machine Learning, Computer Vision, Data Structure and Algorithms, Operating Systems, Database Systems, Linear Algebra, Calculus (I & II), Probability & Statistics*

OTHER PROJECTS

Image Segmentation of cell nuclei using deep learning (2019):
- *Image segmentation using U-Net was done on the nuclei cells. Implementation was done in Tensorflow.*
- *Machine learning concepts (cross-validation, regularization, loss functions) were applied in the project.*

ADDITIONAL EXPERIENCE AND AWARDS

- **Teaching (2016-2020):** *Taught and guided my peers and junior students in CS and Mathematics courses.*
- **Dean's list (2016-2019):** *Dean's list for high achievers.*

Languages and Technologies

- Python; Tensorflow; scikit-learn; Pandas; R, Java; C++; C; C#.NET; SQL; JavaScript;
- Linux; PyCharm; Jupyter Notebook; Visual Studio; Microsoft SQL Server; Eclipse;