

ADNAN MUSHTAQ ALI KAROL

Aspiring Data Scientist / Machine Learning Engineer

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📍 Stuttgart-70569



EXPERIENCE

Master Thesis Student

Fraunhofer IAO / ISS Universität Stuttgart

📅 October 2020 – Ongoing 📍 Stuttgart, Germany

- Handcrafted machine learning versus Deep Learning: Decoding neurophysiological signals for the comparison of workload and emotion classification.
- Institute : In collaboration with Institut für Signalverarbeitung und Systemtheorie (ISS) at the Universität Stuttgart and Neurolab at the Fraunhofer IAO.
- Use of proper machine Learning algorithms for feature extraction of EEG signals and comparison with Deep Learning architectures.
- Skills : Deep Learning, Machine Learning, Feature Extraction, Signal Processing, EEG, ECG, EDA signals.

Werkstudent in Data Science

Wearable Technologies AG

📅 April 2021 – Ongoing 📍 Stuttgart/Munich, Germany

- Working in field of Machine Learning and Data Science.
- Vision is to proactively create an intelligent Wearables & IoT landscape for the future.

Research Assistant

Institute for Technical Optics, Universität Stuttgart

📅 March 2021 – Ongoing 📍 Stuttgart, Germany

- Working as Research Assistant for development of object detection algorithms for Virtual Reality glasses.
- Use of modern architectures like YOLOv4, etc to detect and localize movement of people in a VR based game-room.

Werkstudent in Data Science

Vialytics GmbH

📅 July 2020 – March 2021 📍 Stuttgart, Germany

- Working in field of Machine Learning and Data Science.
- Current Tasks : Train an Object Detector using YOLO v4 to detect road damages using Images and Oracle cloud.
- Use of non-visual smartphone sensors (Acceleration) data on the Smartphone to assess the unevenness of the road (Deployed and Testing).
- Fault and Anomaly analysis for detecting and correcting outliers categorized Roads. Deployed using gRPC and Docker.

Internship in Software Development and Integration

Robert Bosch GmbH

📅 May 2020 – Oct 2020 📍 Stuttgart, Germany

- Internship in software and tool development for semi-autonomous parking systems.
- Working with the Software Integration Team in an agile approach.
- Skills: Python, Jenkins, QAC, and Continuous Integration, JIRA, Git.

SKILLS

Python Machine Learning
Deep Learning Open CV
Oracle Cloud Jenkins Git Docker
C++ C
HTML CSS Javascript Node.js
Express.js Matlab Kafka

EDUCATION

M.Sc. INFOTECH - Embedded Systems

University of Stuttgart

📅 Oct 2018-Ongoing 📍 Stuttgart, Germany

- Embedded Systems, Deep Learning
- Industrial Automation Systems, Intelligent Sensors and Actuators
- Error Control Coding, Imaging Science, Electronic Design Automation

B.E. Electronics and Telecommunication Engineering

University of Mumbai

📅 Aug 2014-May 2018 📍 Mumbai, India

- B.E. Electronics and Telecommunication Engineering
- Grade : 8.80/10 CGPA

CONFERENCES

LSTM and CNN based IMU Sensor Fusion approach for Human Pose Identification in Manual Handling activities.

WeR11. Digitalization and Artificial Intelligence applied to Wearable Technologies and Ergonomics

📅 16 Oct 2020 📍 Stuttgart, Germany

- The International Symposium on Wearable Robotics (WeRob2020) and WearAcon Europe.
- Conference Proceedings will be published by Springer.

EXPERIENCE

Werkstudent in Data Analytics

Argonics GmbH

📅 April 2020 – May 2020

📍 Stuttgart, Germany

- Prediction and Analysis for inland navigation vessels.

Werkstudent in Software Development

Robert Bosch GmbH

📅 December 2019 – April 2020

📍 Stuttgart, Germany

- Backend Development, Data management, data visualisation and data analysis.
- Involved in HIL (hardware in Loop) Analysis.
- Worked on Sequence Quality Centre tool, Mf4 and MDF Data, Python Automation Tasks.
- Tools: Python scripting, Python GUI programming, GIT and SQL.

Student Research Assistant in Software Development IoT

Fraunhofer Institute for Production Engineering and Automation IPA

📅 June 2019 – Sept 2019

📍 Stuttgart, Germany

- Implementation of wireless communication and cloud computing for exoskeletons in the convertible factory.
- Creation of PWA of the Web Application for displaying the data from the Exoskeleton.
- Creation of Dashboard for data visualization of the data from the Exoskeleton sensor coming as data stream using Kafka.

PROJECTS

- LSTM and CNN based Human activity Classification. Keywords-LSTM, CNN, Sensor Fusion, Kalman Filter, TensorFlow, IMU, Raspberry pi.
- EEG Signal Classification using Hand-crafted Machine Learning and Deep Learning. Keywords-EEG, Random-Forest, CNN, Dense Networks.
- Machine Learning Model Deployment using Flask. Keywords-Flask, ML-Deployment.
- CNN and Image Processing Based Plant Disease Detection and Remedy Using Drone. Keywords- CNN, Keras, Tensor Flow, Drone, Image Processing, Google Colab.
- Real-Time Object Detection using YOLOv3.
- Smart Desktop Voice Assistant. Implemented a Jarvis like Smart Desktop Voice Assistant. Keywords-Python Programming.
- Volume Unit Meter. Keywords- Arduino, Sound sensor, C programming
- Face Detection Using OpenCV and HaarCascades. Keywords: Computer Vision
- MNIST Digit Classification Using Sequential Model. Keywords-Sequential Neural Network.

HARDWARE AND IDE'S

Git Bitbucket Jira Confluence
Arduino Uno Raspberry Pi MCS 8051
ESP 32 EMG Sensors
Visual Studio Code Pycharm
Arduino IDE Jupyter Notebook
Anaconda
Oracle Cloud
Pandas Numpy Tensorflow Keras
Seaborn Scikit Learn Matplotlib
gRPC

LANGUAGES

English

Hindi

German



PUBLICATIONS

- Karol Adnan Mushtaq Ali, 'Mobile Hand-off using Wireless CAN protocol: An approach to reduce call drops', International Research Journal of Engineering and Technology, March 2019, Issue 3, Volume 6.
- Karol Adnan Mushtaq Ali, 'Plant Disease Detection using CNN and Remedy', International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, March 2019, Issue 3, Volume 8.

HONORS & AWARDS

- Received the prestigious Tata scholarship for outstanding overall performance.
- Awarded the e-fellows.net scholarship in May 2019-Stuttgart, Germany.
- Participated in Smart India Hackathon and Rajasthan hackathon, which are non stop coding competitions by Government of India.
- Received well recognition in National Level Project Competition. Networks.
- Project was selected amongst the Top 5 project of the department by the College.
- Completed training and courses in various workshops titled "Networking and Hardware", "Internet of Things", "Mobile Making Workshop" etc.