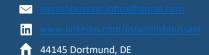
Aamish Hussain

Graduate Student in Robotics



+49 1520 5893479

Programming/Computing

Languages

Python, MATLAB



C++. R

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Technologies

- ROS, Docker, Git, Gazebo
- Jupyter, Numpy, SciKit, Networkx
- Solidworks, Proteus,
- Linux,MS office

Languages

English – business fluent, C2



Urdu, Punjabi - Native



German - A2-B1

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Awards

Best Senior Project, NUST 2017

Merit Scholarship – 4 Semesters

Second Runner up - FICS 2017

Interests

- Long-distance running
- Swimming
- Tennis

EDUCATION

Technische Universität Dortmund, Germany

10-2020 - present

M.Sc. Automation and Robotics

Robotics, Machine learning and Computer Vision

National University of Science and Technology, PK 2017

Bachelors of Engineering, Mechatronics

Project Thesis: Slurry Deposition on Asperous Surfaces using 3D printers

CAREER HISTORY

Work Sabbatical

06-2019 - 08-2020

- Preparation for National Civil Service Examination
- · Independent skill development and voluntary consulting
- Appearance in standard examinations

Independent Project Work

09-2018 - 05-2019

- Developed a low cost smart watch aimed for new users
- Developed core functionality with **BLE**, **CAD** and assembly.
- PCB design, sensor-actuator integration, digital display functionality

Research Assistant @ NUST-CEME

08-2017 - 07-2018

- Utilized Visual Odometry to synchronize robotic arm with human head movement with functionalities in MATLAB
- Modeling and Simulation of the robotic arm in Simulink
- Literature review of state of the art approaches
- Development of GUI with QT

ACADAMIC AND COMMERCIAL PROJECTS

10-2021 04-2022

Race against the machine – demonstrated 5G teleoperation of race cars

- Modified ORB-SLAM3 for integration to existing code base for selfdriving. Utilizing OpenCV and ROS for C++ used Docker containers to deliver a robust application.
- Contributed to path following set-up by utilizing modified pure-pursuit algorithm written in python. Tested the approaches in simulated environment in gazebo and RVIZ.
- Reviewed existing approaches for self-driving cars and wrote documentation

09-2016 09-2017

Slurry Deposition Printer for Asperous Surfaces

- Developed a **3D printer** capable of printing on objects having different sizes, shapes and surfaces.
- Contributed to development of process control GUI implement in QT and python
- Developed a system that takes a image converts it into vector graphics, is manipulatable in GUI and then can be converted into gcodes for GRBL and intern to CNC controls
- Was responsible for debugging of the whole the system comprising of mechanical, electrical and cyber elements.