



AHMAD HASSAN MIRZA

Master Thesis Student at Bosch GmbH



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Ahmad.hm2



https://github.com/ahmadhmirza/



13.10.1988



Pakistani



Work Experience

- Jan 2020 - Jul 2020 **Master Thesis - Robert Bosch GmbH, Stuttgart, Germany.**
Design and development of an inter company software collaboration platform using Service Oriented Architecture and RestAPIs.
- Development of a platform which enables, offering tools and software as web services, using Flask-Python.
 - ECU Base software build process migrated from monolithic to S.O.A.
 - Development of a Machine Learning(ML) and Image Processing Service.
- Jul 2019 - Dec 2019 **Intern - Robert Bosch GmbH, Stuttgart, Germany.**
Automation of ECU software build process for use in software sharing platform.
- Development of scripts, in python and batch, to automate the build process for ECU software.
 - Proposed and successfully migrated the code base to modularized architecture to enable easier maintenance.
- Jan 2019 - Jun 2019 **Werkstudent - Fachhochschule Dortmund, Germany.**
Project MoRoP (Mobile Robot Platform).
- Navigation controller and path planning using laser scanner, odometry, SLAM and ROS Navigation Stack.
 - Development of an android app to map the surroundings of the robot using on-board laser scanner.
- Nov 2013 - Jul 2014 **Research Associate (Lab Engineer) - CIIT, Lahore, Pakistan.**
Lab - Digital Electronics and Microcontrollers
- May 2011 - Oct 2013 **Software Quality Assurance Engineer - GVS, Lahore, Pakistan.**



Education

- Oct 2017 - Present **M.Eng Embedded Systems for Mechatronics - 1.7/4.0**
Fachhochschule Dortmund, Dortmund Germany
Focus: Software development, Machine Learning for computer vision and image processing.
- Aug 2014 - Jun 2016 **Msc Micro and Nano Systems Technology**
University College Of South East Norway
Focus: BioMEMS, Fabrication and Characterization of Lab-on-Chip devices.
- Oct 2006 - Aug 2010 **BSc Electrical Engineering**
University of Central Punjab, Lahore, Pakistan.
Focus: Embedded systems and digital electronics.



Skills



Programming Languages

Python	●●●●●
Java	●●●●●
C/C++	●●●●●
Html	●●●●●
CSS	●●●●●
VHDL	●●●●●
Batch Scripting	●●●●●
XML	●●●●●



Tools & Libraries

Enterprise Architect	●●●●●
Android Studio	●●●●●
ROS	●●●●●
OpenCV	●●●●●
Tensor Flow	●●●●●
Matlab	●●●●●
Adobe Illustrator	●●●●●
Docker	●●●●●
OpenRTOS	●●●●●



Languages

Urdu	●●●●●	Mother Tongue
English	●●●●●	C2
German	●●●●●	B1



Publications

- **ITO-Free 3D MEMS Photodetector for Point-Of-Care Biosensing Devices.**
IEEE-NIH 2016 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies.
- **Comparison and Implementation of Open-Source Face Detection & Tracking Systems on Android Devices for use in home-based Speech Therapy - Poster**
BMT 2019 - 53rd Conference of the German Society for Biomedical Engineering (DGBMT within VDE).



Projects

- Project Avatar - Android application for lip reading using machine learning (tensorflow, OpenCV and dlib).
- Robot with maze navigation to reach the destination – using Embedded C (OpenRTOS).
- Architectural designing of “Autopilot Landing System” – using Enterprise Architect.
- “Follow Me” – Robots that follow an IR source, with convoy mode – using Arduino Uno.
- Implementaiton of serial comm. protocol on LatticeXP2/17E FPGA – using VHDL and Active-HDL for simulations.
- Implementation of several process scheduling algorithms for App4MC platform.



Hobbies

- Painting & Sketching.
- Road cycling.
- Volleyball & Tennis.
- Gaming.
- Reading up and experimenting with technology (softwares and libraries).



References

- Dipl.-Ing Martin Kisser | martin.kisser@de.bosch.com | +49 174 7354610
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- Prof. Dr.-Ing. Jörg Thiem | joerg.thiem@fh-dortmund.de | +49 (0231) 9112-9168
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