



# AHMAD HASSAN MIRZA

## Diplomand at Bosch GmbH



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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.

- A look into software development, using S.O.A and DevOps in a large company.
- Development of a platform which enables, offering tools and software as web services.
- ECU Base software build process migrated from monolithic to S.O.A.
- Development of a Machine Learning(ML) and Image Processing Service.
- Gives user access to various ML services by simple API calls without any tool setup or extensive coding.

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.
- Enable software sharing between OEMs and Bosch.
- Proposed and successfully migrated the code base to modularized architecture to enable easier maintenance of CI and CD pipeline for the software sharing project.

Jan 2019 - Jun 2019

**Werkstudent - Fachhochschule Dortmund, Germany.**

**Project MoRoP (Mobile Robot Platform).**

- Development of nav controller using laser scanner, odometry and ROS Navigation Stack.
- Development of a partner Android application to map the surroundings of the robot using on-board laser scanner.
- Path planning to navigate to a specified goal using the partner application.

Nov 2018 - Jun 2019

**Research Assistant - Fachhochschule Dortmund, Germany.**

**Project Avatar.**

- Design and Development of an Android application capable of performing lip reading using only image processing.
- Research to identify optimum methods to solve the problem.
- Used dlib(cross compiled for android), Tensor Flow, Python and Android platform to develop the application.

Nov 2013 - Jul 2014

**Research Associate (Lab Engineer) - CIIT, Lahore, Pakistan.**

**Lab - Digital Electronics and Microcontrollers**

May 2011 - Oct 2013

**Software Quality Assurance Engineer - Gameview Studios, Lahore, Pakistan.**

**QA Engineer on various game development projects.**

- Writing and executing test cases.
- Took part in all the testing phases from development to release.
- Worked as concept design engineer with the graphics dev team on one of the projects.



## 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.

**Projects Highlights:**

- 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.

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	●●●●●
dLib	●●●●●



### Languages

Urdu	●●●●●	Mother Tounge
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).



## Hobbies

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



## References

- Mr. Martin Kisser | martin.kisser@de.bosch.com | +49 174 7354610  
Engineering Customer Projects Commercial Vehicles Europe and Na (PS-EC/ECC), Robert Bosch GmbH, Stuttgart Germany.
- Prof. Dr.-Ing. Thiem | joerg.thiem@fh-dortmund.de | +49 (0231) 9112-9168  
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05/20/2020