AHMAD HASSAN MIRZA
Diplomand 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.

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 successfuly 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.

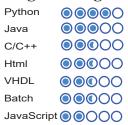**Oct 2006 - Aug 2010** ● **BSc Electrical Engineering**
University of Central Punjab, Lahore, Pakistan.

Focus: Embedded systems and digital electronics.

⚙️ Skills

</> Programming Languages

Python	◉◉◉◉◯
Java	◉◉◉◉◯
C/C++	◉◉◉◑◯
Html	◉◉◉◯◯
VHDL	◉◉◑◯◯
Batch	◉◉◉◯◯
JavaScript	◉◉◯◯◯

🔧 Tools & Libraries

Enterprise Architect	◉◉◉◉◯
Android Studio	◉◉◉◉◯
ROS	◉◉◉◑◯
OpenCV	◉◉◉◉◯
Tensor Flow	◉◉◉◑◯
Matlab	◉◉◉◯◯
Adobe Illustrator	◉◉◑◯◯

👥 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).

AHMAD HASSAN MIRZA
05/20/2020