Ahmad Hassan Mirza

Master Thesis Student at Bosch GmbH

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Ahmad.hm2

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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 successfuly 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 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 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).

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

- 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
  Professor, Steuer- und Regelungstechnik, Fachbereich Informationstechnik, Fh Dortmund, Germany.

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05/20/2020