

MOHAMAD CHAMANMOTLAGH

BSc Student in the Department of Computer Engineering at the Amirkabir University of Technology

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EDUCATION

Bachelor of Science in Computer Engineering *2017 - 2022*
Amirkabir University of Technology (Tehran Polytechnic)

GPA: 17.45 / 20

Last two year's GPA: 18.49 / 20

Thesis Topic: Implementation of a Data Communication System Between a Microcontroller and an FPGA Using CAN-FD Bus Interface and CANOpen Protocol

Thesis Supervisor: Prof. M. Mehdi Homayounpour

RESEARCH INTERESTS

- Embedded Systems
- Internet of Things
- Field Programmable Gate Array (FPGA)
- Computer Architecture
- Operating Systems

RESEARCH EXPERIENCE

IoT Lab, Amirkabir University of Technology *November 2021 - February 2022*
Part-time Undergraduate Research Assistant

Project: LoRaWAN Optimization

- Investigated the effects of different Channel Access Protocols over LoRa on reducing the packet collision rate of the whole network.

CE Department, Amirkabir University of Technology *March 2021 - November 2021*
Part-time Undergraduate Research Assistant

Research Topic: Automotive Embedded Systems

Supervisor: Prof. M. Mehdi Homayounpour

- Combined understandings of Microcontrollers, FPGAs, DSPs, and interfaces like CAN into designing a Real-Time Fail-Safe System.
- Researched methods of Embedded Systems Distribution, including Hardware, Interfaces, and Protocols with a focus on the Automotive Industry.

CE Department, Amirkabir University of Technology *January 2020 - June 2020*
Part-time R&D Assistant

Project: Android TV Optimization

Supervisor: Prof. Hamed Farbeh

Funded by Hadish Sabz Parseh Company

- Improved Remote-Control Movement Detection and Boot-Up Speed.
- Gained hands-on experience with Kernel Programming and Cross-compilers.
- Reviewed design documents and standard specifications in order to modify operating system modules and applications.
- Served as a member of an academic group in collaboration with Hadish Sabz Parseh Company.

TEACHING EXPERIENCE

Amirkabir University of Technology
Teaching Assistant

2020 - Present

Course: **Internet of Things**

Fall 2021

Supervisor: Prof. Mehdi Rasti

Key responsibilities: Creating tutorials, providing guidance for students, and developing and grading assignments

Course: **Microprocessor and Assembly Language**

Fall 2020 - Spring 2021

Supervisor: Prof. Hamed Farbeh

Key responsibilities: Creating tutorials, developing lecturer's course materials, providing guidance for students, and developing and grading assignments

Course: **Operating Systems**

Spring 2021

Supervisor: Prof. Seyyed Ahmad Javadi

Key responsibilities: Providing guidance for students and developing and grading assignments

Course: **Computer Architecture**

Spring 2020

Supervisor: Prof. Hamed Farbeh

Key responsibilities: Holding online classes, providing guidance for students, and developing and grading assignments

PROFESSIONAL EXPERIENCE

Hadish Sabz Parseh Co.
Technical Leader

June 2020 - March 2021

- Led a software development team and tried to meet the business deadlines, including development and deployment of a Resource Planning application inside the company.
- Worked on multiple projects, including Digital Signage R&D, Android TV Optimization, and a series of web-based ERP products.

Medycall Startup.
Web Developer

August 2019 - November 2019

- Developed Client-side code of a web-based system as a member of a startup team.
- Gained experience with working in a highly agile team.

Paydar Bonyan Farayand Co.
Web Developer

February 2019 - Nov 2019

- Participated in the development of both Server-side and Client-side components of a web-based system as a member of a professional team.

TECHNICAL SKILLS

Programming Language

C/C++, Java, Python, ARM Assembly, C#, JS

Design and Development Tool

Vivado, Quartus Prime, µVision, Proteus, Altium Designer

Simulation Tool

OMNeT++, ModelSim

HDL

Verilog, VHDL

Machine Learning

TensorFlow, NumPy, MATLAB

GPU Programming Framework

CUDA, OpenCL

Virtualization Tool

Docker, VMware

Database

MySQL, PostgreSQL, MongoDB

RELEVANT COURSEWORK

- Embedded and Real-Time Systems
- Microprocessors and Assembly Language
- Programmable Digital Systems Design
- Interface Circuit Design
- Digital Electronics
- Computer Architecture
- Operating Systems
- Internet of Things
- Signals and Systems
- Computer Networks
- Information Security
- Web Programming
- Multicore Programming

LANGUAGES

- English (Proficient)
TOEFL iBT score:
 - **112 Overall**
 - 29 in Reading, 30 in Listening, 26 in Speaking, and 27 in Writing
- Persian (Native)

NOTABLE CERTIFICATES

Machine Learning

December 2021

Online non-credit course authorized by Stanford University and offered through Coursera
[Certificate document]

HONORS AND AWARDS

Ranked in the top 0.2% in the Iranian National Universities Entrance Exam among more than 150,000 participants.

2017

PROJECTS

Open source projects are available at <https://github.com/MohamadCM>.

REFERENCES

References are available upon request.