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 - Expected graduation at March 2022*
Amirkabir University of Technology (Tehran Polytechnic)

GPA:	**17.17/20 (3.56/4.00)**
Last two year's GPA:	18.19/20 (3.77/4.00)
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

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

RESEARCH EXPERIENCE

IoT Lab, Amirkabir University of Technology *November 2021 - Present*
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 *2020 - Present*
Teaching Assistant

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. *June 2020 - March 2021*
Technical Leader

- 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. *August 2019 - November 2019*
Web Developer

- 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. *February 2019 - Nov 2019*
Web Developer

- 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.