ZAHRA MOJTAHEDIN

+989038308178 ZahraMojtahediin@gmail.com linkedin.com/in/zahramojtahedin github.com/zahramojtahedin

Education

Sharif University Of Technology **Oct. 2020 – 2024[Expected]**

Bachelor of Science in Electrical Engineering (Digital Systems) *Tehran, Iran*

* Major GPA: 17.73/20 (3.45/4)

Relevant Coursework

- Pulse Technique and Design Circuit & Lab
- Computer Architecture and Microprocessor & Lab
- Logic Circuits and Digital Systems & Lab
- Mathematics Methods in Engineering(linear algebra)
- Engineering mathematics
- Engineering Probability and Statistics
- Microprocessor Systems Design & Lab
- Machine Learning
- Advanced Computer Architecture
- Object-oriented programming
- Electronics 1 & Lab
- Electronics 2 & Lab

Research & Internship

- I am currently developing a camera that detects eyelid movements and captures eye nerve signals to identify signs of human consciousness. The data is stored on an ESP32 board, which allows for coordinated transmission and reception of data with other devices.(On Going)
- Internship at BIOSEN Group - STM32 board programming for a Mobile Cardiac Telemetry monitor in C
- Design and implementation of a flexible vital signs monitoring device, tracking SpO2, heart rate, ECG signals and the life status of patient - was in charge of device-side data security and board programming, as well as data encryption, transfer and reception.(On Going)

Projects

Programming

- A MIPS processor pipeline designed for the *Computer Architecture and Microprocessor*, via the four-issue method, in 5 stages with two buffers between each two stages.
- The course project for the *Electrical Circuit Theory* aimed to implement and evaluate the performance of the Node Analysis Method.

Simulation & **Design**

- Designed an active noise reduction system focused on optimizing total harmonic distortion using Schmitt Trigger Circuits, an op-amp integrator, and a low-pass filter for the *Pulse Technique and Circuit Design* course project
- Designed a device for *Logic Circuits and Digital Systems* to compare the reaction times of four competing agents that takes input from a judge as well, using several NAND gates.
- Designed an analog-to-digital converter and simulated signal quantization for the *Sensing and Measurement* course

Honors

* Top %35 in Electrical Engineering students at Sharif University of Technology
* Ranked first amongst the female students of the Digital Systems branch
* Ranked amongst the top %0.8 in the National University Entrance Exam
* Graduated from Farzanegan High School (National Organization for Development of Exceptional Talents) in Mathematics and Physics, GPA: 19.75/20

Experience

Laboratory & Teaching Assistant at Sharif University of Technology

- Computer Architecture and Microprocessor
- Logic Circuits and Digital Systems
- Electronics 2
- Electrical Circuits and Lab
- Sensing and Measuring
- Engineering Probability & Statistics
- Object-oriented programming
- Fundamentals of programming
- Language of Electricity
- Introduction to Electrical Engineering

Skills

Languages

- English (Professional working proficiency)
- Persian (Native)
- Turkish (Advanced)
- Azerbaijani (Native)

Software

- Proteus
- ADS
- Altium Designer
- STM32CubeMX
- PSpice
- LTspice
- Arduino
- Linux
- Git
- Microsoft Office
- Photoshop
- Lightroom

Programming Language

- MIPS Assembly
- VHDL/Verilog
- Python
- MATLAB
- Java
- C/C++
- Laravel
- LaTex

Volunteer Experience

∗ Content Creation and Event Photographer | ReACT 2023
∗ Event Coordinator | Iran Workshop on Communication and Information Theory
∗ Seminar Organizer | Jaryan
∗ Event Graphics Head | Emeet 2022
∗ Event Coordinator | ReACT 2022
∗ Head Graphic Designer | Event of Life in Sharif

Hobbies

- Volleyball Player of EE Department Women's Team
- Graphic Designer
- Photographer
- Painter