ALPER ALKAN

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EDUCATION

Middle East Technical University, BS in Electrical and Electronics Engineering 2021 – Present

- GPA: 3.93/4.0
- **Relevant Coursework:** Electromagnetic Theory, Electromagnetic Waves, Signals and Systems I, Signals and Systems II

ENGINEERING EXPERIENCE

R&D Intern, SFA Electric Aug 2024 – Sept 2024

- Learned about vacuum and SF6 medium voltage switchgears, their uses, components and working principles. Had the chance to visit production lines to closely examine the design and production steps of these devices and the techniques used to construct components that are required for the manufacturing of these devices.
- I also experienced the engineering office environment and how engineering teams consisting of different professions handle projects and tackle problems they face.

RF/MW System Design Candidate Engineer, ASELSAN Feb 2025 – Jun 2025

- Learned about RF/MW network parameters, general topologies,usage of many tools such as Smith Charts and Network Analyzers, filter types, and their advantages/disadvantages.
- Had the opportunity to design a lumped-component elliptic band-pass filter using the ADS and AWR softwares(First with ideal elements and then with S-Parameters of used components), and then had the chance to construct it on a PCB and tune by hand to meet required attenuations at specific frequencies and maximum pass-band losses.

PROJECTS

2D Fighting Game in Verilog Github Repository Link

- Developed a Footsies inspired 2D fighting game with 1-Player and 2-Player game modes to be played on DE1-SOC FGPA developer board. Used many of the board features such as HEX Displays, on-board buttons, LEDs, GPIO pins, and a VGA display output to display current game and player states, and take inputs.

Photophone Project Documents

- Designed and constructed a photophone system that takes audio inputs from a microphone and transmits it with light to another circuit,, which then outputs said audio through a speaker.
- Designed many active filters, an Automatic Gain Control(AGC) circuit, a multiplexer to mix a 30kHz and a low-frequency signal, a LASER LED to transmit the signals, a photodiode to receive the signals, and a power amplifier in order to output the received audio from a speaker.

SKILLS

Programming Languages

Python, C, C++, Verilog

Applications

MATLAB, LTSpice, SIEMENS NX, ADS, AWR Microwave Suite

Languages

English (C1), Turkish(Native)