NABID FARVEZ

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OBJECTIVE

M.S. electrical engineering student seeking an internship position in the area of product development and embedded systems by growing skills in firmware for MCUs, PCB design, automation scripting, and user software.

EDUCATION

STANFORD UNIVERSITY, *Stanford, CA* (Sept 2023 - Anticipated April 2025)

- **Master of Science in Electrical Engineering**

GEORGIA INSTITUTE OF TECHNOLOGY, *Atlanta, GA* (Aug 2018 - Dec 2022)

- **Bachelor of Science in Electrical Engineering,** Minor in Robotics, GPA: 4.0
- **Stamps President's Scholarship –** Full-ride merit scholarship for Top 40 (0.5%) of all GT undergrad applicants
- **ECE Senior Scholar Award** – Given to 34 of all graduating ECE seniors in class of 2022 with the highest GPA

EXPERIENCE

APPLE, *Cupertino, CA* (Jan 2023 – May 2023)

Hardware Systems Engineering Intern - AirPods

- Guided layout of flex test PCB in cross-functional teams with attention to signal integrity practices
- Wrote Python script to generate opcode commands of Bluetooth Tx scenarios for system coexistence testing
- Introduced to STM32 development using HAL and STM32CubeMX while bringing up MCU peripherals on custom PCB

SARIOGLU BIOMEDICAL MICROSYSTEMS LAB, *Atlanta, GA* (Jan 2019 – Sept 2022)

Research Assistant

- Wrote Python script to automate microscope scanning for cell detection with OpenCV
- Constructed fluid-pump apparatus using AVR microcontroller and solenoid valves
- Developing motorized platform to align PDMS chips to higher precision than by hand to be used by researchers, involving stepper motor controller PCB design, Fusion360 CAD, and Python GUI app development

MIT LINCOLN LABORATORY, *Lexington, MA* (May 2022 – August 2022)

Electrical Engineering Intern (Div 3/Group 33)

- Constructed noise collection radar rack and validated coherency between receiver array for fielding external noise
- Coded C++ interface for commanding off-the-shelf receiver as 50% cheaper solution to usual vendor hardware
- Led team during intern idea poster competition for a biosensing heating sleeve (**Top 6 Finalist of 38 teams**)
- Assisted in teardown and testing of site hardware for later deployment during travel to White Sands Missile Range

JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY, *Laurel, MD* (Jan 2021 – July 2021)

Space Science Electronics Engineering Intern (SES/SRX)

- Managed time across multiple tasks supporting instruments for NASA's Psyche, Dragonfly, PIMS, and BECA projects
- Ported MATLAB code for FPGA GUI control into GSEOS (Python) for circuit board slice testing on Psyche
- Designed GUIs in GSEOS (Python) to monitor and control vacuum pressure, accelerometer, and PSUs via UART
- Performed schematic capture in Mentor DxDesigner for low voltage regulators (buck, LDO) on Dragonfly board
- Automated two-month thermal testing and data collection for connector qualification with Python script (PyVISA)
- Assisted in BECA processor board debugging using scope, DMM, function generator, and datasheets

Other: Instructor for GT Electronics Makerspace (Fall 2019 - Fall 2022), Team Lead/Mentor for Medical Robotics Club (Spring 2022 **–** Fall 2022), Teaching Assistant for Intro ECE Seminar (Fall 2021), Teaching Assistant for Physics I (Fall 2019), Secretary of IEEE-Engineers in Medicine and Biology Society (Fall 2019, Spring 2019)

PROJECTS

Smart Sleeping Mask – *Spring 2022 Capstone Design Expo* **(Won Best Overall Project out of 218 teams)**

- Electronics lead on mask to optimize wakefulness from sleep with REM detection via eye movement using EOG
- Originated and proposed idea through preliminary research and subsystem-level hardware description for mask
- Constructed breadboard prototype for testing early communication firmware and power for runtime estimation
- Designed and fabricated small form factor PCB with attention to digital/analog separation
- Fabricated and integrated hardware for three units of final design involving hand soldering of SMD components

Others: ARM mbed RPG game, Music Visualizer PCB, heat sleeve PCB, FPGA SRAM Peripheral Interface

SKILLS

- **Programming:** Python, C, MATLAB, C++, Java, Git, HTML & CSS, STM32CubeIDE
- **Electronics:** PCB design (KiCAD, Allegro System Capture), LTSpice, Arduino/mbed/STM32, Oscilloscope, Instrument Automation (SCPI/VISA), Spectrum Analyzer, Waveform Generator, Soldering