NABID FARVEZ

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, *Atlanta, GA*   (Anticipated Fall 2022)
- **Bachelor of Science in Electrical Engineering,** Minor in Robotics, GPA: 4.0
- **Stamps President's Scholarship** (Top 1% of undergrad applicants based on progress, service, leadership)

School Coursework: Data Structures & Algorithms, Object-Oriented Programming, Circuit Analysis, Programming HW/SW Systems, Digital Systems Design, Electromagnetics, Microelectronic Circuits, Biomedical Instrumentation & Sensor Systems, Intro to Computer Vision

EXPERIENCE

JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LAB, *Laurel, MD*   (Jan 2021 – July 2021)
Space Science Electronics Engineering Intern (SES/SRX), Security Clearance: N/A
- Managed time across multiple tasks supporting NASA's Psyche, Dragonfly, PIMS, and BECA projects
- Ported MATLAB code for FPGA GUI control into GSEOS (Python) for circuit board slice testing
- Designed GUIs in GSEOS (Python) to monitor and control vacuum pressure, accelerometer, and PSUs
- Performed schematic capture in Mentor for low voltage regulators (buck, LDO) on Dragonfly processor board
- Automated two-month thermal testing for connector qualification with Python script (PyVISA)
- Assisted in BECA processor board debugging using scope, DMM, function generator, and datasheets

BIOMEDICAL MICROSYSTEMS LAB, *Atlanta, GA*   (Jan 2019 – **Present**)
Research Assistant
- Wrote Python script to automate microscope scanning for cell detection with OpenCV
- Constructed fluid-pump apparatus using AVR microcontroller and solenoid valves
- Designed PCB for time-division multiplexing of Coulter counter signals
- Developing motorized platform to align PDMS chips automatically and to higher precision than by hand

GT SCHOOL OF PHYSICS, *Atlanta, GA*   (Aug 2019 – Dec 2019)
Teaching Assistant
- TA for Physics 2211: Newtonian mechanics with lab focus on modeling with Python
- Explain physical phenomena and supervise lab execution in room of 30+ students
- Grade and provide feedback to students on weekly quizzes

PROJECTS

PDMS Chip Aligner Platform – Biomedical Microsystems Lab
- Sole developer on motorized system to align PDMS chips to be used by researchers in years to come
- [Designed PCB](#) in KiCAD to interface Raspberry Pi with stepper motors via DRV2588 IC drivers
- Programmed motor controls and controller GUI (Tkinter library) in Python
- Prototyped 3D printed parts to add camera fixture and chip holder to platform in Fusion360
- Incorporating camera feed and marker detection via OpenCV for future automation of electrode alignment

Others: [ARM mbed RPG game](#), [Music Visualizer PCB](#), FPGA SRAM Peripheral Interface, Musical Sculpture (IP)

SKILLS

Programming: Python, MATLAB & Simulink, C, Git, Java, HTML & CSS, MySQL
Electronics: PCB design (KiCAD, Eagle), LTSpice, Arduino/Raspberry Pi/ARM mbed, Oscilloscope, Laser Cutter, Instrument Automation (SCPI/VISA), NI Multisim, Function Generator, Soldering
Miscellaneous: Fusion 360, GSEOS, basic Mentor DxDesigner, basic VHDL, OpalKelly API, 3D Printing, Unity Engine

LEADERSHIP

ECE DISCOVERY STUDIO, *Atlanta, GA*   (Aug 2021 – **Present)**
Peer Leader
- Facilitate discussions and plan lessons for classroom of 200+ incoming ECE students
- Mentor cohort of 13 students regarding engineering career development

(IDC) THE HIVE MAKERSPACE, *Atlanta, GA*   (Aug 2019 – **Present**)
Instructor
- Teach users on safe equipment use: 3D printer, laser cutter, PCB fab, and electronic benchtop tools
- Troubleshoot and aid users with their projects, including consulting designs
- Plan and volunteer at community workshop events (i.e. Halloween soldering,)