Ankith Rajashekar | US CITIZEN | arajashe@terpmail.umd.edu | (443) 735-6181 | Salisbury, MD 21801
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EDUCATION

University of Maryland, College Park **Graduated** May 2023
B.S. Physics **GPA**: 3.3
College Park Scholars

RELEVANT SKILLS & COURSEWORK

* PHYS165 - Programming and Modeling in Physics
* PHYS276 - Experimental Physics II (Electricity and Magnetism)
* PHYS375 - Electromagnetic Waves and Optics Lab
* PHYS485 - Electronic Circuits Lab

Languages: Python, C++, JavaScript, HTML, CSS, SQL, MATLAB
Miscellaneous: Django, Git/GitHub, Linux and Windows Terminals, PostgreSQL, HTTP Protocols and Status Codes, AWS S3
Self-Studies: Computer Networking, Data Structures & Algorithms

PROJECTS

Django - Personal Blog https://www.arajashe.blog | https://github.com/ankith860/django_project

* Leveraged the Django Framework to create a personal blog where one can make a profile and blog posts with full CRUD functionality
* Employed CSS and HTML for the frontend, Python for the backend, and implemented Django REST libraries to create a scalable, custom API that the frontend consumes to securely retrieve JSON data
* Utilized PostgreSQL for the database and AWS S3 for file storage
* Automated deployment with Git hooks that deploy to a Linode host, a Linux Virtual Machine, with Apache as the backend server

Automated Temperature Data Acquisition to Calculate Electromagnet's Resistance

* Used an Arduino microcontroller, programmed with C++, to drive modulated current through a transistor and read temperature data from a thermistor
* Fit the data to relevant equations to derive the electromagnet's resistance

Obstacle Avoidance using Arduino Microcontroller

* Programmed an Arduino, using C++, to collect data from Ultrasonic and IR sensors
* Analyzed the data to calculate the distance to various obstacles

Randomized Projectile Motion Game

* Wrote a Python Script using Python data science libraries (Matplotlib, Pandas, NumPy, and SciPy), to plot randomized trajectories for a projectile
* Instructed players to then guess the values of the variables in the projectile equations using the Position v. Time data from the trajectory

Automated Frequency Measurement for Sodium (Na) Discharge Lamp

* Applied MATLAB to drive a servo-motor as well as collect data from a photodiode sensor in a Michelson interferometer
* Calibrated the interferometer, a series of reflecting mirrors, to split and recombine a light beam emitted from a Na Lamp; the servo-motor altered the distance between mirrors, and the photodiode measured the beam's intensity
* Automated plotting of the Intensity v. Distance Between Mirrors curve and calculated the two Na frequencies in the beam

WORK EXPERIENCE

Server at Olive Garden **February 2023 - March 2023**

* Dealt with a fast-paced environment, which pushed me to develop strong stress management and mental organizational skills
* Strengthened listening and communication skills by taking the guests' orders and working with other servers and chefs

Mover at Lucia's Fine Furniture Moving Help **June 2022 - August 2022**

* Coordinated a team of movers, thus gaining leadership and coordination experience
* Improved communication skills as I often explained the plan to other employees for each moving operation

Physics Tutor (Volunteer) **February 2018 - June 2018**

* Taught various physical concepts to peers and fortified my ability to illustrate technical ideas

Habitat for Humanity (Volunteer) **February 2018 - June 2018**

* Volunteered in teams to provide home restoration & construction services for low income families