Mukul Periwal

267-357-7410 | mp3636@drexel.edu | linkedin.com/in/Mukul | github.com/Mukul |
https://portfolio-mukulperiwal.herokuapp.com

EDUCATION

Drexel University, Philadelphia, PA January 2021 – June 2025
Bachelor of Science in Physics, Pennoni Honors College *Cumulative GPA: 3.97*

Relevant Coursework: Advanced Programming Tools and Techniques, Computer Programming I, II, Differential
Equations, Calculus I, II, IV, Linear Algebra, Computational Physics I, Intro Nuclear Physics, Electromagnetic Fields I,
II, Thermodynamics, Statistical Mechanics, Classical Mechanics

EXPERIENCE

Undergraduate Research Assistant June 2021 – Present
Physics Department, Drexel University *Philadelphia, PA*

- Assist Dr. Russell Neilson conduct research to detect the presence of dark matter using bubble chamber
- Run approximately 10 simulations per week on a virtually set up detector (GEANT4) written in C++
- Write python scripts capable of converting simulations' output data into informative graphs using pandas library

Computer Science Teaching Assistant September 2021 – Present
Drexel University *Philadelphia, PA*

- Lead lab discussions for 25+ students during Computer Science Principles (CS150, Fall) course sessions every week
- Review and debug code for 10+ students every week while clarifying fundamental python concepts and algorithms
- Grade laboratory and homework assignments, provide detailed feedback, and answer any follow-up questions

Equipment Window Assistant June 2021 – Present
Drexel Recreation Center *Philadelphia, PA*

- Check out any requested equipment from 20+ sports categories and ensure no damage while checking back in
- Help log and maintain inventory to keep track when it is requested and fulfilled and of the total inventory cost
- Keep a clean, organized and welcoming equipment window desk, and respond to members' issues or queries

PERSONAL PROJECTS

Blog Website | *Flask, Jinja, PostgreSQL, HTML, CSS, Bootstrap, Heroku*
- Designed a fully functional personalised blog website which is editable only by the admin.
- People can register and share their views on the blog posts.

Sudoku Solver | *Python*
- Wrote a python script that solves a 9x9 sudoku with 3x3 grids using backtracking.
- Enables the user to try and solve the sudoku and after three mistakes, the solution is printed out.

Flight Deals Notifier | *Requests, SMTPlib, Twilio*
- Devised a program that sends the user notifications about the cheapest flights according to their needs.
- Gets the input from user's Google sheets and web scrapes the data from a third-party website's API.

Rest API | *Flask, SQL, HTML*
- Created a Rest API for the details of cafes in a city.
- GET, POST, PUT and DELETE requests are available for users with valid key.

TECHNICAL SKILLS

Languages: Python, SQL, HTML/CSS, VPython, LaTeX, Bash
Frameworks: Flask, RestAPI, Bootstrap, SQLAlchemy, Jinja2
Developer Tools: Git, PyCharm, Google Collaborate
Libraries: Pandas, NumPy, Matplotlib, Tkinter, BeautifulSoup, Selenium, Turtle, SMTPLib
Operating Systems: Windows, Linux, Mac OS

AWARDS AND INVOLVEMENT

Dean's Scholarship, 2020 – Present
Dean's List, 2021 – Present
Society of Physics Students, Member, 2021 – Present