

Mukul Periwal

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https://portfolio-mukulperiwal.herokuapp.com

EDUCATION

Drexel University, Philadelphia, PA

January 2021 – June 2025

Bachelor of Science in Physics, Pennoni Honors College

Cumulative GPA: 3.98

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

Blockchain Research Engineer | *TypeScript, JavaScript, Python, Bash*

March 2022 – September 2022

Genesis Global Trading

New York City, NY

- Worked closely with the VP of cryptography to research protocols for various cryptocurrencies
- Co-authored fully functional proof of concept projects to facilitate transactions among blockchain participants
- Identified patterns to draw out similarities in different cryptocurrency implementations to promote re-usability
- Implemented novel features of these cryptocurrencies to aid the primary research

Computer Science Teaching Assistant | *JavaScript, Python*

September 2021 – Present

Drexel University

Philadelphia, PA

- Lead lab discussions for 25+ students during Computer Science Principles 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

Undergraduate Research Assistant | *Python, C++*

June 2021 – March 2022

Physics Department, Drexel University

Philadelphia, PA

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

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, TypeScript, JavaScript, HTML/CSS, VPython, \LaTeX , Bash

Frameworks: Flask, RestAPI, Bootstrap, SQLAlchemy, Jinja2, express

Developer Tools: Git, PyCharm, Google Collaborate, VSCode

Libraries: ethers-js, web3.js, Pandas, NumPy, Matplotlib, 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