

Mukul Periwal

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EDUCATION

Drexel University, Philadelphia, PA

January 2021 – June 2025

BS in Physics with Computer Science and Math minors

Cumulative GPA: 3.95

- **Selected Coursework:** Data Structures and Algorithms, Probability and Statistics, Big Data Physics, Adv. Programming Tools and Techniques, Differential Eqs, Linear Algebra, Quantum Mechanics, Electromagnetic Fields

EXPERIENCE

Data Scientist | AWS, SQL, Python

April 2023 – September 2023

Resolution Life US

Philadelphia, PA

- Accelerated settlement creation by automating data transformation and generation, reducing process time by **97%**
- Employed **AWS Glue** for dynamic **SQL** queries to formulate organized and structured tables using **S3 datasets**
- Engineered robust **PySpark** scripts to process query outputs to dynamically generate settlements from templates
- Executed **E2E** testing in AWS environments using linked **DynamoDB** jobs, ensuring smooth production migration

Blockchain Research Engineer | TypeScript, Python, Bash

March 2022 – September 2022

Genesis Global Trading

New York City, NY

- Collaborated on cryptocurrency research with the VP of cryptography, covering **10+** cryptocurrencies
- Co-authored functional TypeScript and Python **proof of concept** projects, streamlining transaction processes
- Improved research through novel cryptocurrency feature implementation and performed **E2E** testing using Bash

Undergraduate Research Assistant | Python, C++

June 2021 – March 2022

Physics Department, Drexel University

Philadelphia, PA

- Assisted Scintillation Bubble Chamber collaboration in dark matter detection research by calculating economic feasibility for slowing down ^{14}Ar neutrons with potential moderators
- Utilized Geant4, which primarily follows Monte Carlo principles, to simulate experiments with controlled variables
- Designed and developed python scripts leveraging **Big Data** methodologies to visualize and comprehend the results

Computer Science Teaching Assistant | Python, JavaScript

September 2021 – Present

Drexel University

Philadelphia, PA

- Mentored 60+ students as **Scrum Master**, elevating agile skills, and led weekly lab discussions for 30+ students
- Instructed 20+ students in fundamental programming principles to bolster problem-solving abilities
- Graded assignments and provided timely, detailed feedback to 100+ students in lab and homework assignments

PROJECTS

ResuTech | Python, React, NodeJS, AWS

- Creating a user-centric website for crafting \LaTeX resumes without the need for \LaTeX coding expertise
- Implementing resume parsing, ML-based job suggestions, and **OCR** for image-based resume keyword extraction

Database Contract | Solidity, Typescript, Hardhat

- Programmed a smart contract on **EVM** to store the data of a user, their friend list and messages on blockchain
- Deployed the contract using **hardhat** on lukso L16 testnet and interacted with it to build a chat dapp

Cafe Database | Flask, SQLAlchemy, HTML

- Constructed a **Rest API** database to store the details of cafes in a city on a **SQLite** database
- Implemented the functionality of accessing and updating the database for users owning a valid API key

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, C, HTML/CSS, VPython, \LaTeX , Bash, Solidity, SQL

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

Libraries: ethers-js, web3.js, Pandas, NumPy, Matplotlib, PySpark, boto3, Selenium, SMTPLib

AWARDS AND INVOLVEMENT

Larson Endowed Scholarship, 2021 – 2022

Dean's List, 2021 – Present

Drexel Blockchain Organization, Member, 2022 – Present