

# 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*

- Automated settlement generation process by data extraction, transformation, and generation, reducing settlement process time by 97% using AWS Glue and PySpark
- Employed AWS Glue for dynamic SQL queries, structuring tables from internal data, and generating settlements
- Produced detailed documentation for seamless onboarding, covering automation, SQL logic, and Python script

### 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 end-to-end testing using Bash scripts

### 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  $^{14}\text{Ar}$  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 60+ students in lab and homework assignments

## PROJECTS

### ResuTech | *Python, React, NodeJS, AWS*

- Creating a user-centric website for crafting  $\text{\LaTeX}$  resumes without the need for  $\text{\LaTeX}$  coding expertise
- Implementing resume parsing, ML-based job title 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,  $\text{\LaTeX}$ , 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