

# Abrar Habib

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## EDUCATION

### CUNY The City College of New York

*Bachelor of Science in Computer Science*

**GPA:** 3.622/4.0, Dean's List

**Related Coursework:** Data Structures, Algorithms, Software Design Lab, Computer Security, Computer Organization

New York City, NY

*Expected Graduation, May 2026*

## EXPERIENCE

### Research Associate

February 2023 – July 2023

*IQSpatial*

*Remote*

- Designed and prototyped a Frontend Flask GUI using Jinja and Bootstrap to identify health risks in communities and recommend sustainable solutions for heat vulnerability analysis projects.
- Collaborated with a team of 4 to develop a REST API to provide 20 million users in the NYC metropolitan area with temperature and air quality metrics.
- Developed comprehensive 15-page documentation for the API, providing clear instructions on its functionalities, usage, and maintenance.
- Authored a research article focusing on a comprehensive study to identify neighborhoods vulnerable to extreme heat in New York City utilizing data analysis techniques and geographic information systems to map and assess heat-prone areas.

### Computer Science Summer Institute Scholar

July 2022 – August 2022

*Google*

*Remote*

- Developed a dynamic and engaging Jeopardy clone using HTML, CSS, and JavaScript, integrating an API to enhance user interaction and engagement.
- Designed and built 12 unique websites over a span of four weeks, progressively increasing in complexity, showcasing a strong commitment to continuous learning and adaptability.
- Demonstrated proficiency in full-stack web development by creating a comprehensive final project in Flask, featuring real-time instant messaging functionality and user account management, including the integration of a database to store and manage user data.
- Collaborated with a diverse team of peers to complete complex coding projects and effectively problem-solved through the iterative development process, displaying strong teamwork and communication skills.

## PROJECTS

### Pax Academia | *Python, beautifulsoup, SQLite, Markdown, discord.py, Git*

April 2023 – Present

- Contributed to a collaborative open-source project, a Discord bot coded in Python, that serves a vibrant community of 160,000 members.
- Conducted a detailed analysis of approximately 5,000 lines of code to create comprehensive documentation, ensuring that developers and end-users have a clear understanding of the bot's functionality and features.
- Implemented support for 1000 requests per minute through Python's Threading library.

### Dimuon Spectrum Analysis | *Python, NumPy, Matplotlib,*

May 2022 – June 2022

- Analyzed 100,000 data points of an atom collision from the Compact Muon Solenoid experiment.
- Utilized NumPy and Matplotlib to recreate 10 histograms that depicted the energy distribution of collisions.
- Observed the existence of a foreign particle as a result of the collision to nearly 99% accuracy.

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Rust, SQL (SQLite), JavaScript, Java, HTML/CSS, VHDL

**Frameworks:** Node.js, Flask, Spring Boot, RESTAPI

**Developer Tools:** Git, GitHub CLI, VS Code, PyCharm, IntelliJ, Clion, Linux, Intel Quartus

**Libraries:** pandas, NumPy, Matplotlib, Threading, pathlib, bootstrap