Adiba Ejaz

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EDUCATION

Columbia University, New York, NY May 2023

B.A. in Computer Science and Mathematics (GPA: 4.1. Dean's List. Concentration: Philosophy)

Relevant coursework: Advanced Programming (*Unix, C).* Algorithms. Computational Learning Theory. Complexity. Modern Algebra and Analysis. Discrete Math. Seminars in algorithmic game theory, random walks, Markov chains.

SKILLS

- **Programming languages:** Proficient in Java, Python, C, JavaScript. Experienced in HTML/CSS.
- **Technologies:** Proficient in Git, Unix, ServiceNow, Vim. Experienced in MongoDB, Express, React, Node, Flask.

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Stripe. New York, NY. June 2022– Present

Mathematics Teaching Assistant, Columbia University. New York, NY January 2021 – Present

- 3 semesters of graduate-level group theory and undergraduate-level proof-based linear algebra and calculus
- Systematically reviewed material in weekly office hours and graded problem sets with comprehensive feedback

Software Engineer Intern, ServiceNow. Santa Clara, CA May – August 2021

With the cloud automation team under the Software within Systems division.

- Rendered internal metrics 3x more efficiently accessible by implementing server-side class using *JavaScript Glide API*
- Enabled visualization of evacuations' progress by building interactive, multi-feature dashboard in *Now Platform*
- Landed top 10 in intern hackathon for SprintNow, a full-stack Agile sprint planning application built using *Now Platform, Python Flask, Scikit-Learn,* and *Natural Language Toolkit*

Research Assistant, The Billinge Group, Columbia University. New York, NY May 2020 – August 2021

- Automated and optimized analysis, correction, and projection of grant expenditure by developing *matplotlib* tool
- Re-architected group database management software from command-line into *MERN* stack web application
- Expanded database querying features in Regolith by authoring and maintaining multiple *Python* scripts using TDD
- Boosted robustness of group-wide unit testing by introducing *pytest* unit testing feature for input validation
- Research under Professor Simon Billinge on algorithm to extract homologies of high-dimensional datasets

PROJECTS

Biologically plausible parser for recursive sentences. Under Professor Christos Papadimitriou, researched, developed, and implemented algorithm in Assembly Calculus to simulate neural parsing of recursive sentences.

Mutually avoiding paths. Designed and implemented *Python* approximation algorithm for NP-complete problem of finding k vertex-disjoint paths between k source-sink pairs in graph. 98% effective on adversarial inputs for $k = 10$.

HTTP web server. Developed from scratch using *Sockets API* in *C* to serve static and dynamic content.

LEADERSHIP AND ACTIVITIES

Philosophy Instructor, *Corrupt the Youth NYC.* Delivering philosophy instruction to public high school students.
Team Liaison, *Columbia Debate Society.* Cornell finalist. Top 5 debater at CUNY, American University. WSDC UAE team.
Technology Director, *Columbia Superposition.* Delivering CS instruction to gender minorities in computer science.
Back-End Developer, *Columbia Data Product Initiative.* Developed Flask back-end for music transcription application.