

ALFARDIL ALAM

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EDUCATION

New York University, College of Arts and Science | New York, NY

Sep 2023 – May 2027

Bachelor of Arts in Computer Science and Mathematics

Relevant Coursework: Data Structures & Algorithms, Discrete Mathematics, Linear Algebra, Multivariable Calculus

Stuyvesant High School | New York, NY

Sep 2019 – Jun 2023

EXPERIENCE

NYU High Speed Research Network — *Project Contributor*

Jan 2025 – Present

- Integrated a MAC-based authentication onto a dashboard using **Nextjs**. Built custom **Knex** queries to handle **SQLite** database operations and store verified NYU authentication requests. Utilized unit tests and **Jest** to maintain reliability.
- Worked with **Docker**-based deployments for authentication services using **Keycloak**, automating local development and cloud-based authentication. Enabled SSO login to authenticate users and assign user permissions connecting to NYU.

Passengers United — *Software Engineering Intern*

Sep 2024 – Present

- Collaborated with transit safety advocacy experts to find a technical solution to tackle commuter safety challenges for public transit users in NYC. Engineered an interface through **Expo** and used focus groups for testing.
- Created an interface for users to submit incident reports or transit updates. Combined live traffic, safety updates, and accessibility data from the MTA with crowd-sourced data into a real-time delays dashboard.
- Presented future plans to a board of **15+** and was interviewed by journalism agencies like BBC and Columbia Journalism.

Synergy Prep — *SHSAT and SAT Instructor*

Feb 2023 – Present

- Prepared customized math, reading, and grammar lessons for 7th and 8th grade students to excel in the SHSAT. Provided discrete AMC solutions and college preparation tips to 11th graders, increasing test readiness.
- Boosted SHSAT and SAT diagnostic scores by up to 38% and 42%, respectively as measured by in-class proctored exams.

PROJECTS

Paw and Order — *Realtime AI Debate (Winner Hack@Brown: Best Use of MongoDB Atlas)*

Feb 2025

- Leveraged **Vite** to quickly develop a web app designed to facilitate debate between children, used **OpenAI** to analyze talking points and declare a winner and provide feedback, sent realtime data to simulate conversation using **MongoDB**.
- Orchestrated robust backend data handling by developing custom **Express** routes to manage live data streams – ensuring seamless server-client connections via MongoDB while assigning roles and spearheading team collaboration.
- Attended Amazon University Event- Brown University Hackathon to expand network + build connections with students & recruiters.

CodeBloom — *Leetcode Leaderboard Tracker*

Jan 2025

- Developed a competitive coding platform using **React & SpringBoot**, allowing Patina Network mentees to track & compare LeetCode progress on a real-time leaderboard with the goal of providing motivation to the community.
- Reverse engineered & integrated **GraphQL** queries from *leetcode.com* in order to access data without manual intervention and bypass rate-limiting issues encountered from already existing APIs. Optimized custom **SQL** queries to create RESTful API endpoints, custom objects, and database models to store data through **Postgres**.
- Configured build automation with Maven and deployed using DigitalOcean and Docker for containerization. Used an MVC chain of flow in collaboration with two front-end engineers to optimize efficiency of development.

Aurangzeb — *E-Commerce Website*

Dec 2024

- Built an interactive e-commerce platform using **Nextjs**, with **Postgres** and **Prisma** for database management, enabling seamless product listing, secure order management through **Webhook** endpoints, and **Stripe** to handle secure checkouts.
- Implemented **React-Three-Fiber** for 3D clothing models and designed a comprehensive admin dashboard to streamline control over product drops and inventory customization. Customized styling through the use of Tailwind CSS.

ACTIVITIES

Men's Ultimate Frisbee — *Captain & Social Media Manager*

Sep 2021 – Present

- Managed **\$15,000+** in donations and school funding, coordinating travel, accommodations, and tournament logistics for **25+** athletes, while communicating with other captains to arrange game schedules for multiple out-of-state competitions.
- Enhanced team visibility and community engagement by creating social media highlight reels and humorous skits, which boosted online presence, attracting hundreds of followers and **tens of thousands** of viewers.

SKILLS

Skills: Python, Java, Typescript, HTML, CSS, React, Nextjs, Express, Expo, SpringBoot, Tailwind CSS, OpenAI, Firebase, MongoDB, Postgres, SQL, SQLite, Prisma, DBeaver, Stripe, Knex, Mantine, Maven, Gradle, Docker, DigitalOcean, Vercel, Git