Mohammed Hit

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EDUCATION

Boston University – Kilachand Honors College Boston, MA
Bachelor of Arts, Computer Science, Minor in Statistics May 2027
GPA: 3.96/4.00 | Dean's List All Semesters
Relevant Coursework: Database Systems, Computer Systems, Algorithms, Data Structures, Probability, Statistics, Linear Algebra, Discrete Math, Calculus I & II

SKILLS

Languages: Python, JavaScript, Java, C
Frameworks/Libraries: React.js, Node.js, Express.js, Django, Socket.IO
Tools/Platforms: MongoDB, PostgreSQL, XML, Redis, Git, AWS EC2, Nginx, Docker

WORK/RELATED EXPERIENCES

Atomic Hands – Tachyo (Nonprofit ASL Educational Platform) Remote
Software Engineering Intern Jun 2025 – Aug 2025
- Enhancing ASL video sign search by implementing a **search filtering system** based on education level and specificity needs
- Extending **React.js frontend** to improve existing search bar functionality and allow users to choose signs based on academic relevance
- Contributing to backend with **Node.js** and MongoDB; designing **MongoDB schemas** to include supporting metadata like learning level and supplemental visual aids (e.g. images of teachers signing)

Boston University – Spark! Innovation Fellowship Boston, MA
Technical Driver Jan 2025 – Present
- Collaborated with teammates on the **Django backend API** for MissedConnections (see below) to design a functioning demo
- Conducted **weekly standups** to report progress to course staff and industry **software engineers**
- Surveyed users for application flaws and used **SCRUM** framework to **iteratively design** the app for demo-readiness

Boston University – CS 111 (In-depth Python course) Boston, MA
Course Assistant Sep 2024 – Present
- Held **office hours** and assisted in labs to help students with **Python** concepts and homework
- **Graded** hundreds of students' work, providing **detailed feedback** on **code efficienc**y, **possible flaws**/**edge cases**, and **scalability**
- Reinforced students' understanding of **data structures**, **control flow**, and **recursion**, culminating in a hands-on **Connect Four AI project**

PROJECTS

QuickKanban | Socket.IO, React.js, Node.js MongoDB, Docker, AWS EC2, Nginx May 2025 – Present
- Engineered a **real-time task management board** for team collaboration sessions with instant updates using **WebSockets**
- Utilized a **React** frontend for **drag-and-drop functionality** for task changes between columns; implemented live cursor indicators for multi-user interaction and workflow efficiency
- Engineered a **RESTful API** with **Express.js** and **MongoDB** to handle multiple socket connections, collaborative rooms, and real-time task interactions; deployed backend on **AWS EC2** behind **Nginx reverse proxy** to support scalable, production access

MissedConnections | Django**,** Django Rest Framework**,** PostgreSQL, Redis, JWT, AWS EC2, AWS S3 Nov 2024 – Present
- Developed a **geolocation**-**based** matchmaking app to connect students with similar interests
- Created a **Django RESTful API** to calculate **user proximity** and implemented a **categorical matching algorithm** to find best matches for students
- Designed **PostgreSQL** schemas for user profiles, location markers, and core social media features; integrated a **Redis caching** layer for high-traffic endpoints, improving response time and scalability
- **Winner: 1st Place – 12.5k BU Student Wellbeing Competition; Audience Choice – Spark! Demo Day 2025**

CollegeCarpool | Django, Django Rest Framework, PostgreSQL Nov 2024 – Present
- Engineered a **ride-sharing service** for students who live in proximity to one another to coordinate carpool trips back home
- Developing a **passenger-driver matching system** based on fuel costs, distance of travel, and route overlap
- Working closely with BU students to implement **safety features** (e.g. **student ID authentication** to register on the platform)
- **Winner: $500 BU Innovation Grant**