MAHDIUR RAHMAN

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SKILLS

- **LANGUAGES** C++, JavaScript, Node.js, HTML, CSS, oCaml, LISP, SQL, PostgreSQL, MIPS
- **TECHNOLOGIES** React.js, Redux(w/React-Redux), React-Router, Express, Sequelize

PROJECTS

MockUp Capstone Project | *Javascript, Node, React (w/ Redux & Router), Express, Sequelize, PostgreSQL*

- Developed fullstack CRUD app w/ team as capstone for TTP Bootcamp: *MockUp* is a peer to peer site which allows students and engineers to schedule mock interviews; focused on career development and talent acquisition.
- Project user authentication, 2 user types (student and engineer) and a separate datatype to represent interviews.
- I set-up the email-system to provide schedule notifications for interviews, managed password encryption/storage, helped plan authentication with Passport.js, and planned wireframe design to front-end team while I did backend.
- Front-end team required help with several bugs; switched roles and debugged for several days til site functioned. ***Still working on project, planned expansion and partnership with TTP & Cuny2x organizations.***

Huffman Compression Algorithm | *oCaml*

- Developed a file compression program using the Huffman-Tree technique in oCaml.
- oCaml libraries did not allow for easy reading and writing of files (for decompression)—developed unique workaround-solution; main program reads file, and creates unique program which can decompress file.

Dijkstra's Shortest Paths Algorithm | *C++*

- Final and toughest Software Design Class III project: was hands-free and tested creativity of student.
- Used min-heap along with two custom data structures to implement Dijkstra's shortest-path system; involved careful understanding of object to object interaction and clever memory management.
- Finished assignment before classmates; went about mentoring classmates on their own projects.

CS Study Group (Fall 2019) | *C++, LISP, MIPS*

- Organized and took on leadership role of CS study group with classmates. Initiated and guided discussions and test preparations. Often deferred to by group for final input/approval on projects.
- A.I. Project: Group unable to decide on approach for puzzle-solver program. Lead discussion, and formulated method for puzzle solving. Lead discussion on the data structures used for proposed method. Able to delegate tasks and create functioning puzzle-solver. *Programmed in LISP*
- Comp. Architecture Project: Group unable to manage CPU effectively via MIPS—personally restructured entire code. Thoroughly explained and made sure team members understood solution—group received A+ for grade. *Programmed in MIPS*

EXPERIENCE

CUNY Tech Talent Pipeline Bootcamp Summer 2019 | *React, Node, Express, PostgreSQL* **|** *July 2019 – Aug 2019*

- Accepted via online coding exam; received second highest score.
- Accelerated program which taught fullstack web dev and algorithm analysis in short span (2 months).
- Often took on leadership role in group projects, especially for fullstack projects. Often managed team member roles, jumped between team members to assist in problems, organized group debugging sessions.
- Greatest skill acquired: research. Bootcamp was extremely intensive often with brief tutorials; learned to get the job done anyway by extensive research on relevant technologies. Can now easily pick up any technology required for team; has allowed for me to be a very dynamic programmer.

CUNY Startups Fall 2017 Cohort | *Aug 2017 – Dec 2017*

- Lead team of four students to pitch venture which aimed to provide user-to-user rentals.
- Was project manager of team; lead discussion on weekly goals, managed team's tasks on Trello, made sure deadlines were met.
- Developed UX designs on Proto.io; tested design on small set of fellow cohorts, updated designs as necessary.
- Set up Qualtrics surveys to collect market feedback; able to use feedback to pivot to video game rentals.

EDUCATION

- BA Computer Science & BA Economics, Hunter College | *Graduation: May 2020 (expected)*

COURSE HISTORY

- **COMPUTER SCIENCE** *Discrete Structures | Software Design I – III | Computer Architecture I – II | Artificial Intelligence | Computer Theory | Functional Programming: oCaml | Logical Basis Programming (Debugging)*
- **MATHEMATICS** *Matrix Algebra | Calculus I – II | Statistics*
- **CURRENT COURSES** *Big Data (Grad School Course) | Operating Systems | Advanced Database Management*
- **SELF-STUDY** *Colt Steele's Web Dev Bootcamp | Bob Ziroll's Learn React | Stephen Grider's React and Redux*