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

Campus Manager CRUD App | *Javascript, Node, React (w/ Redux & Router), Express, Sequelize, PostgreSQL*

- Developed fullstack CRUD app w/ team. Can add campuses and students, and connect students to campuses.
- Front end powered by React and data held in Redux store. Backend hosted via PostgreSQL and managed through Sequelize library.
- Team was having trouble making URL-routes available via the address bar from the start. Was able to use knowledge of React and React Router to loop and create routes for each student/campus entry.

Huffman Compression Algorithm | *oCaml*

- Developed a file compression program using the Huffman-Tree technique in oCaml.
- Created unique solution to compression problem: made compression program which creates unique decompression program for each file that is compressed.

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, PostreSQL* **|** *5/2019 – present*

- Accepted via online coding exam; received second highest score.
- Have furthered CSS and Javascript capabilities; become proficient with React, Redux and React-Router—can build fully working web applications.
- React Projects: created several projects with React involving local state and API calls via fetch and lifecycle methods. Helped create large fullstack CRUD application using Redux to manage data and React-Router for conditional rendering, with PostgreSQL and Node for backend.

CUNY Startups Fall 2017 Cohort | *8/2017 – 12/2017*

- 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 in oCaml | Logical Basis of Programming*
- **MATHEMATICS** *Matric Algebra | Calculus I – II | Statistics*
- **SELF-STUDY** *Colt Steele's Web Dev Bootcamp | Bob Ziroll's Learn React | Stephen Grider's React and Redux*