

MAHDIUR RAHMAN

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PROJECTS

Huffman Compression Algorithm | *oCaml*

- Developed a file compression program using the Huffman-Tree technique in the functional language oCaml. Transferred symbols found in file to binary tree; placement in tree represented symbol's code.
- Created a workaround for the problem of compiling multiple files in oCaml: created a single file, compress.ml, which created a second file, decompress.ml, that is unique to the file being compressed.

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

- Final and toughest Algorithms III project: was hands-free and tested creativity of student.
- I made use of three data structures: a Graph object to represent map as nodes, a Min-heap calculating closest node, and a Dijkstra object which used min-heap to calculate nearest distances on Graph. Required careful analysis of object-to-object interaction.
- Finished assignment in short-time span (1 day), and earlier than classmates; then went about helping classmates to develop their own versions of the project.

Fall Semester 2019 | *C++, LISP, MIPS*

- Was grouped together with three classmates in A.I. class, ended up working together for every class and project for rest of semester.
- Took on leadership role of the group: initiated and guided discussions/prep, was often deferred to by group to finalize/approve final designs. Many instances where project hit a wall—was able to provide last-minute solution.

EXPERIENCE

CUNY Tech Talent Pipeline Bootcamp Summer 2019 | *HTML, CSS, JavaScript, React.js* | 5/2019 - present

- Accepted via online coding exam; received second highest score.
- Have further perfected CSS via learning FlexBox, updated JavaScript knowledge to ES6, and learned React.js. Currently created front-end assets using React Components.
- Currently learning Redux and Node.js. Will learn MongoDB in coming weeks.

CUNY Startups Fall 2017 Cohort | *HTML, CSS, JavaScript* | 8/2017 - 12/2017

- Gathered team of four to pitch venture. Took on leadership position in team.
- Lead discussion on weekly goals, managed team's tasks on Trello. Made sure deadlines were met.
- Developed design conscious prototypes on platform Proto.io
- Able to successfully develop front end assets programmed in HTML/CSS and JavaScript through coordinating team efforts.

SKILLS

- **WEB-DEVELOPMENT** React.js, HTML, CSS, Bootstrap, FlexBox, Javascript, jQuery
- **SOFTWARE** C++, oCaml, Common LISP, MIPS

EDUCATION

- BA Computer Science & BA Economics, Hunter College | *Graduation: Dec 2019 (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 | Brad Traversy's MERN Stack

HONORS

- Dean's List, Hunter College, 2018
- Dean's List, Stony Brook University, 2014
- Went to specialized high school Bronx Science