

AMMAR AHMED

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Projects

WaterlooBasics | *HTML/CSS, JavaScript, Git, GitHub*

May 2020

- Developed front-end website containing resources for incoming UWaterloo Engineering applicants.
- Managed a team of 7 first year students to collaboratively develop static website using **HTML/CSS** and **JavaScript**.
- Amassed a total of **8.59k** impressions in **3 months** after deployment.
- Executed **JavaScript** implementation for the mobile functionality of the website as well as all **CSS** animations.

Home Renovation | *Project Management*

December 2020

- Learned laminate flooring techniques to successfully transform **600 square feet** from carpet to laminate flooring.
- Restored carpeted stairs through removing carpet, sanding, staining and glossing hardwood stairs underneath.
- Pre-planned tasks, created Gantt chart and adhered to plan to ensure project completion in under **3 weeks**.
- Learned proper operation of various power tools such as mitre saw, table saw, nail gun and high-speed sanding machines.

Workout Tracker | *MongoDB, Express.js, Node.js, React.js*

May 2021

- **Full-stack** web application created using the **MERN** stack to track and visualize workouts.
- Implemented **CRUD** functionality for **MongoDB** database through various **API endpoints** using **Express.js**.
- Front-end implemented using the **React** framework in conjunction with **Bootstrap**.
- Visualized workout data through dynamically producing **graphs** using the **Recharts** framework.

Path Finding Maze Generator | *React.js, Canvas API*

September 2021

- Designed a **path-finding maze generator** web application using **React.js** and the **Canvas API**.
- Generated procedural, pseudo-random mazes through the **recursive backtracking** algorithm that are solved to find the optimal path with the **A* path-finding** algorithm.
- Persisted **state** of application between maze generation and path-finding through the use of **React hooks**.
- Implemented **object-oriented programming** to create classes for grid cell's, vectors and Canvas drawing.

Work Experience

University of Waterloo

May 2021 – August 2021

Developer

Waterloo, Ontario

- Built interactive course catalogues using **HTML/CSS, JavaScript, and Bootstrap**.
- Liaised with Deloitte Human Capital consultants to provide **UI/UX** improvements for their educational course provided to University of Waterloo students.
- Employed **JavaScript** proficiency to create **auto-scrolling** for Bootstrap accordions which was implemented in over **100 webpages** across **10+** educational courses.
- Provided **JavaScript automation service** in order to increase team **workflow efficiency**.

Education

University of Waterloo

Sep. 2020 – May 2025

BASc. in Nanotechnology Engineering

Waterloo, Ontario

Technical Skills

Languages: JavaScript, Python, HTML/CSS, MATLAB, C++, \LaTeX

Developer Tools: VS Code, Google Firebase, Heroku, MongoDB Atlas

Technologies/Frameworks: React, MongoDB, Express, Node, Bootstrap, GitHub, SolidWorks CAD

Honors & Awards

Hafiz-ul-Quran | *Islamic Foundation of Toronto*

December 2017

- Memorization of 850 page holy book in classical Arabic
- Certified by the top Islamic Insititute of Toronto

Extracurriculars

Academic Representative

September 2020 – May 2021

- Collaborated with professors and team members to find solutions to problems regarding cohort satisfaction.
- Elected twice in successive terms due to excellent performance.
- Leveraged statistics gathered to motivate professors into improving their quality of teaching.