


# Mahmoud El Bestawy

## Software Developer

*A capable and passionate computer science student ready to create, develop, and change the world.*


 mahmoudme.com

 github.com/mebestawy

 Toronto

 m.e.bestawy@gmail.com

 linkedin.com/in/bestawy

 647 926 9145

## Projects

### Web Development

React.js Favourite City Survey Web-app (<https://best-city-vote.web.app>) — 5 / 2020 - Present

Designed and implemented a web-app using the React.js library and Firebase backend functionality. In the creation of this web-app, Utilized React features such as state manipulation, event-handling, event-propagation, and use of the component life cycle. Also used Firebase's Firestore to gather votes from users and to send information about the stored votes to dynamically render components of the web-app.

Personal Website (<https://mahmoudme.com>) — 10 / 2018 - Present

Created responsive layouts using HTML and CSS/SCSS that remain attractive at multiple screen sizes. Implemented JavaScript modules using jQuery to render the Header and footer elements of each page as well as to implement event listeners for clicking, scrolling, or resizing the screen.

### App Development

Truth or Dare Android App ([shorturl.at/dnvGN](https://shorturl.at/dnvGN)) — 7 / 2019

Designed app UI using Adobe XD. Incorporated Model-View-Controller design pattern in implementing the different screens of the app. Incorporated Singleton design pattern to implement the module responsible for collected data about the players' inputs. App was developed using Java and the UI using XML in Android Studio.

## Work Experience

### Xtend Education

Computer Science Instructor — 11 / 2019 - Present

Explained programming concepts such loops, functions, and conditionals to high school students. Taught students Java and Python basics with use of Java graphics libraries and pygame. Helped and gave students feedback on computer science related homework and school projects, as well as created custom course for beginner programmers to python.

## Education

**University of Toronto — Bachelor of Science Candidate: Computer Science**

09/2018 - Present

- Data Structures and Analysis
- Computational Complexity and Computability
- Software Tools and Systems Programming
- Software Design
- Intro to Neural Networks and Machine Learning
- Computer Organization

## Assignments

- Created responsive layouts using HTML and CSS/SCSS that remain attractive at multiple screen sizes. Implemented JavaScript modules using jQuery to render the Header and footer elements of each page as well as to implement event listeners for clicking, scrolling, or resizing the screen.
- Created responsive layouts using HTML and CSS/SCSS that remain attractive at multiple screen sizes. Implemented JavaScript modules using jQuery to render the Header and footer elements of each page as well as to implement event listeners for clicking, scrolling, or resizing the screen.

---

## Personal Projects

---

### Web Development

10/2018 - Present

#### Personal Website (<https://mahmoudme.com>)

- Implemented responsive website layouts using HTML, CSS/SCSS.
- Used JS/JQuery to dynamically load headers and footers.
- Implemented event-handling in JavaScript.

### Android App Development

7/2019 - Present

#### Truth or Dare ([shorturl.at/dnvGN](https://shorturl.at/dnvGN))

- Designed app UI using Adobe XD.
- Implemented app mechanics and UI using Java, XML, and Android Studio.
- Implemented multiple modules incorporating Singleton design pattern.

---

## Work Experience

---

### Web Development Associate

07/2019 - 11/2019

#### IBA Student Group ([www.ibautm.com](http://www.ibautm.com))

- Designed different event page templates using AdobeXD.
- Assisted with the designing and building of webpages using Wix.
- Participated in team meetings to communicate progress and determine course of action.

### Computer Science Instructor

11/2019 - Present

#### Xtend Education

- Presented Java and Python syntax such loops, functions, and conditionals to students.
- Prepared classes for students wishing to compete in the Junior CCC.

---

## Programming Experience

---

### JavaScript

1 year

- Used jQuery to implement animations and manipulate DOM on personal site.
- Implemented scripts to dynamically load and interact with HTML elements.
- Implemented event-handlers responsible for detection of a user's actions on my personal site.

### Java

2 years

- Implemented multiple programs such as Android apps, a digital Othello game, and a digital drawing program.
- Implemented code utilizing design patterns such as MVC, Singleton, Strategy, Observer/Observable, and Factory.

### Python

3 years

- Used Numpy, Pytorch to develop and train a multi-layer perceptron to predict the upcoming word in a 4-gram.
- Implemented and utilized different data structures such as linked-lists, doubly-linked-lists, trees, and BST as parts of school projects.
- Implemented and utilized iterative and recursive algorithms such as Quick-sort, Tim-sort, and Merge-sort in school projects.

---

## Education

---

### Bachelor of Science Candidate: Computer Science

09/2018 - Present

University of Toronto

3.35 CGPA

- Data Structures and Analysis
- Introduction to Neural Networks and Machine Learning
- Computational Complexity and Computability
- Software Tools and Systems Programming
- Probability and Statistics I

---

## Work Experience

---

### Web Development Associate

07/2019 - Present

IBA - University of Toronto (Mississauga)

- *Designing different event page templates using Adobe XD.*
- *Building webpages using Wix.*
- *Implementing a night-mode option using Javascript through Corvid.*

---

## Programming Languages

---

### Java

2 years

- *Developed object oriented programs with multiple modules.*

### Python

3 years

- *Implemented different data structures, sorting algorithms, and object oriented programs.*
- *Worked with frameworks such as pytest, pygame, and hypothesis.*

### JavaScript

8 months

- *Implemented animations, and other scripts involving different logic structures.*

---

## Personal Projects

---

### Web Development

10/2018 - Present

Personal Website (<http://mahmoudme.com>)

- *Designed website layout.*
- *Created CSS affects.*
- *Working on incorporating JS functionality such as jQuery and REACT into the website.*

---

## Interests

---

Visions of Science (Volunteer)

Web design

Programming

Web development

---

## Programming Experience

---

### School Related

2015 - Present

#### Object Oriented Programming

- *Designed and implemented numerous programs running on multiple module with use of inheritance, abstraction, and encapsulation.*

#### Data Structures

- *Was responsible for building and using multiple standard data structure including linked lists, trees (+ BSTs), stacks, queue, and arrays.*

#### Algorithms

- *Built binary search algorithm in operation with linked lists, arrays, and trees.*
- *Built multiple efficient sorting algorithms such as merge, quick, and timsort.*

---

## Work Experience

---

### Web Development Associate

07/2019 - Present

IBA - University of Toronto (Mississauga)

- *Designing different event page templates using Adobe XD.*
- *Building webpages using Wix.*
- *Implementing a night-mode option using Javascript through Corvid.*

### Warehouse Associate

06/2017 - 08/2017

Adaptall Inc.

- *Organized and maintained warehouse.*
- *Receive, pick and pack orders.*
- *Help customers with general inquiries and orders.*