Mahmoud El Bestawy

Software Engineer

A capable and passionate third-year computer science student eager to learn and ready to build something new.

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Education

University of Toronto | Bachelor of Science Candidate: Computer Science | *09 / 2018 — Present*

Computer Science…………………………………………………………………………….…………………………………Specialist
Mathematical Sciences……….Minor

Projects

Parallel Application of Convolutions | 10 */ 2020*

Implemented a parallel multi-thread program in C/C++ using POSIX threads that would apply a given convolution to a greyscale image. Insured correctness of the program through the effective use of mutex locks and pthread barriers. Observed a decrease in runtime proportional to the number of threads provided when compared to the equivalent sequential implementation.

React.js Web-app: Favourite City Survey | *5 / 2020*

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

Shoe Pair Classifier Conv Net | *3 / 2020*

Built a convolutional neural network that can predict whether two pictures show shoes that are from the same pair or different pairs. The convolutional neural network was implemented in Python and utilized Pytorch, Numpy, Pandas, and Matplotlib to visualize some of the results of training the network. The convolutional neural network correctly classified the shoe-pairs with a test accuracy of 83%.

Java Othello Game | *10 / 2019 — 11 / 2019*

Developed numerous features alongside a team of students to develop digital Othello game. Using Java and Object-Oriented-Design we successfully developed the game while correctly implementing inheritance between classes, interfaces, and design patterns such as MVC, Visitor, and Strategy. Coordination of the development process was done using Git functionality including branching and merging under the Agile Scrum Methodology perspective.

Truth or Dare Android App | *7 / 2019*

Incorporated Model-View-Controller design pattern in implementing the different Java modules of the app. Incorporated Singleton design pattern to implement the module responsible for collecting and handling data from the player. App was implemented using Java and the UI using XML in Android Studio.

Work Experience

Xtend Education | Computer Science Instructor | *11 / 2019 — Present*

Taught students Java and Python basics using different libraries such as JavaFX and Pygame. Assisted students working on computer science projects. Introduced new students to the basics of object-oriented programming with Python and Java. Students report significant performance improvement in secondary school computer science courses.