Jonathan Tran | Software Engineer

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EDUCATION

City College Of New York Grove School Of Engineering | B.S Computer Science, GPA 3.4 / 4.0.

TECHNICAL SKILLS

Programming language: Java.
Familiar with: JavaScript, Python, SQL and HTML.

School Projects

Document Sharing System (Group Project) **Oct 2018 - Dec 2018**

- An application which allows users to create, save, edit, share, and version control text documents.
- Utilized a relational database (MySQL) to store data on users, invitations, edits, and documents.
- Implemented text editor features, such as saving, editing, and inviting users to edit documents with Java and JDBC.
- Implemented a taboo word detection for documents. JDBC queries and flag users based on document content.
- Employed JavaFx for text editor, user manager, and document manager graphic user interface.

GameBook Social Media Site (Group Project) **Oct 2018 - Dec 2018**

- Utilized relational database (MySQL) to store information on users, video games, and friends list.
- Employed Express.js and Node.js server to handle API requests to the database.
- Utilized JavaScript, Handlebars.js, and HTML to display data to the user.
- Implemented user's profiles and friends list views with HTML and CSS.
- Implemented friend request function using Express.js and SQL to query the friend's list table in the database.

NC-Hash (Senior Design) **Jan 2019 - Dec 2019**

- Application combats non-consensual images. It hashes images locally without revealing how the hashing took place.
- Exclusively worked on the front-end using JavaFX and Java.
- Implemented drag and drop of images, file explorer, and a disintegration animation for images during hashing event.
- Senior design group was featured in the Wall Street Journal.

N-Queens Problem Genetic Algorithm **May 2019**

- Implemented a genetic algorithm to solve the slow run-time of the backing tracking solution using Java.
- A population of solutions is randomly generated. The most fit solutions will be chosen for reproduction with a small chance of mutation. The genetic algorithm will eventually converge on a solution in a reasonable time when N=100.

Side Projects

AttaChat **Present**

- Utilized Spring MVC and Hibernate to create a web application, where users can comment, reply, and discuss topics.
- Utilized relational database (MySQL) to save data on users, threads, comments and replies.
- Employed Hibernate to handle all low-level SQL code, and to easily query the database.
- Implemented comments/replies system with relational databases and Hibernate.
- Employed Hibernate's OneToMany relation to populate comment trees with replies (children).
- Utilized JSP to recursively traverse the entire comment tree and display the comments on the HTML page.

Algorithm Visualizer **Present**

- A client-side application that gives users a visualization of how famous algorithms work on a 2D grid.
- Implemented algorithms such as DFS, BFS, Dijkstra's Shortest Path, A* Search, Greedy Best First Search, Bi-Directional Search and a maze generation algorithm called Depth First Search Recursive BackTracking.
- Utilized JavaScript and p5.js for algorithms, animations, and interactivity with the grid.
- Utilized CSS and Bootstrap for a simple and clean look.

Fitboi.tech (NS Hackathon 2019 at Lehman College, Group) **Nov 2019**

- Employed Python and Ski-Learn's Linear Regression model to predict the user's body fat percentage.
- User's body measurements would be used as features for the model, and depending on the percentage, a workout program would be assigned to the user. (Hackathon Goal: Promote Health).