# **Jonathan Tran**

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#### **EDUCATION**

**Grove School Of Engineering City College Of New York, NY --** B.S. in Computer Science. **GPA 3.42**, Dec 2019.

#### **SKILLS**

Primary Programming Languages: Java.

#### **SCHOOL PROJECTS**

#### NC-Hash (Group Senior Design) (Spring 2019):

- An application that hashes images locally without the user knowing how the hashing took place. Main purpose of this application is to combat non-consensual images.
- Exclusively worked on the front-end using **JavaFX** to ensure users feel safe.
- Group was accepted into the Cyber **NYC Inventors to Founders** program based on the application.

#### **N-Queens Genetic Algorithm** (Spring 2019):

- To greatly improve the backtracking solution run time; a genetic algorithm was implemented. This genetic algorithm will choose the two most fit "solutions" from a population, mate, mutate, and repeat until a solution is found. The project was written in **Java**.

## **Document Sharing System (Group Project)** (Fall 2018):

- A document sharing system letting users create, save, edit, share, and version control documents.
- Helped implement various features such as, taboo word detection. text editor, and **MySQL** and **JDBC** database calls; along with, graphic user interface using **JavaFX** and **Java**.

#### GameBook (Group Project) (Fall 2018):

- A social media website to showcase the group's relational database knowledge.
- Designed some of the web pages layouts, database schemas, API calls to the **MySQL** database, and the sql script for setting up the database.
- Front-end was written in JavaScript, HTML, and CSS; database using MySQL.
- Technologies used were, **node.js**, **express.js**, **and handlebars.js**.

#### **SIDE PROJECTS**

#### **Graph-search-pathfinding-visualization** (2020):

- A web application that helps users visualize how algorithms work. Algorithms like, **DFS**, **BFS**, **Dijkstra's algorithm**, **A\* Search algorithm**, **Greedy Best First Search** and **Bi-Directional Search**.
- Application was written in **JavaScript**, **p5.js**, **HTML**, **CSS**, and **Bootstrap**.

## **Fitboi.tech (NS Hackathon** 2019 at Lehman College, **Group Project**):

- Fitboi.tech is a web application to help improve physical health. Used two models to determine body fat percentage; neural networks and image recognition, but the accuracy was too low. Implemented a backup model using linear regression with body measurements as features.
- Implemented using Python Django web framework, Ski-learn, Pytourch, and HTML.

### **Fits Android Application** (Summer 2019):

- An android application designed to help users keep track of items they're interested in purchasing.
- Designed GUI, classes, database schemas. Used Activities, Fragments, and Activity lifecycle.
- Application was implemented using **Java**, **Android's SDK**, **SQLite**, and **Android Studio**.

## Fan Fictor Django Web App (Summer 2019):

- A simple social media website where users login and create various works of fiction. Users can create works of fiction for public or private use, edit, and comment.
- Implemented using **Python**, **Django web framework**, **SQLite** for backend, and **Django templates** (**HTML**) for frontend.