Abhishek **Chakraborty**

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Website: https://abhichakra.github.io | GitHub: github.com/abhiChakra

SKILLS

LANGUAGES: Java, Python, JavaScript, HTML & CSS, Verilog, R

TECHNOLOGIES: Postgres, Android, Git, JavaFX, Unix

TOOLS: IntelliJ, PyCharm, Visual Studio Code, Android Studio

EXPERIENCE

SOFTWARE ENGINEER INTERN – STAPLES INC. | January – April 2019

Developed **discrete** and **event-based Java** simulator to improve robotic efficiency in Staples warehouses. Simulator lets data scientists model and test algorithms for multi-robot warehouse systems with up to 100 mobile robots.

- Created simulator output graphs and animation with **Python** using **Matplotlib** library with pyplot and animation.
- Implemented dynamic robot routing using **A* algorithm**. Featured robot-collision avoidance using grid **segment-locking** system with multi-robot deadlock detection using **directed edge graph**.
- Simulated warehouse order timings using **Poisson process** and worked with **Quadtree** data structure for robot **speed** and **collision detection**.

PROJECTS

RESTMAN Restaurant Manager | GitHub: Java-Restaurant-Management-System
- Synchronized system manages food orders and employee tasks and displays relevant analytics such as menu item popularity and periodic sales using **JavaFX**.
- Frontend developed using JavaFX and backend using **Java**.

WORDLOOKUP Chrome Extension | GitHub: Google-Chrome-WordLookup-Extension
- Enables easy lookup of word by highlighting word and clicking extension icon.
- Utilized **Wordnik API** for word data along with **Google Chrome API**.
- Used **HTML** & **CSS** to design extension pop-up and **JavaScript** and **jQuery** to query, receive and parse data.

Android Weather App | GitHub: Android-Weather-App
- Used **OpenWeatherMap**, **Android API's** and **SQLite** to build weather application with Android Studio IDE.

EDUCATION

UNIVERSITY OF TORONTO | Toronto, ON | 3rd Year Student (2017 - Expected May 2021)

Candidate for Honours Bachelor of Science – Computer Science & Statistics

Relevant Coursework: Data Structures & Analysis, Software Design, Intro to Databases, Computer Organization, Methods of Data Analysis, Statistics for Computer Science