## Allen Peng Lu

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Skilled in the development and maintenance of elegant Android Studio mobile applications while meeting time constraints. Experienced in developing operating system components such as Linux Shells and Simulated File Systems. Well-versed in various algorithm design paradigms using discrete mathematics. Experienced in Object-Oriented design, analysis, and implementation in teams of 2-6 developers.

# **Core Competencies**

Python

Java

Android Studio

- Python SQLite3
- C/C++

Mips Assembly

Excel Forecasting

### **Education**

• Computing Science, 3<sup>rd</sup> Year, University of Alberta (Sept 2016 – Scheduled for April 2021)

# **Personal Projects**

## Git handle: ApluUalberta

#### **Mood-Tracker Android Studio Group Project (September 2019 – December 2019)**

Glo – Android Mobile App

Github Link: <a href="https://github.com/CMPUT301F19T03/GroupProject1">https://github.com/CMPUT301F19T03/GroupProject1</a>

- Programmed in Java, tracks a user's emotional state and allows them to follow friends
- A collaboration of 6 group members using Github pull requests to encourage collaboration
- Google Maps and Firestore API to keep track of user moods, times, dates, reasons, and location
- Extensive Revisioning of App Interfaces to provide an eye-pleasing interface
- Weekly team meetings, remote communication with discord, and extensive UML re-versioning

#### **Crime Statistics Database Program (March 2019 – April 2019)**

Crime Statistics UI - Edmonton Open Data Initiative

Github Link: https://github.com/ApluUalberta/Crime-Statistics-Database-Program

- Simple Command Line Interface that allows for 4 complex database queries on a given Database
- Embedded SQLITE3 Queries in Python to create a simple UI
- Imported Pandas and Folium Libraries to plot queried data onto graphs
- Menu Entry runs 1 of 4 Queries for graphs and statistics generated from menu queries

#### LPT-Johnson Scheduling Program (September 2019 – December 2019)

File Instance Generator and Average Plotter

Github Link: <a href="https://github.com/ApluUalberta/LPT-Johnson-Scheduler">https://github.com/ApluUalberta/LPT-Johnson-Scheduler</a>

- Takes in files (-i argument) or generates 400,000 random files instances (-r argument) with the specified format
- Schedules a specified number of jobs with a specified size and number of machines using LPT and Johnson Algorithms to read the instance files
- Takes the average ratios of processing time of specified file groups for the given algorithms and plots them on 2d, and 3d graphs using GNU Plot

#### **Hobbies**

Powerlifting, Drone Photography, RC Vehicle Modification, E-Commerce Entrepreneurship

#### Allen Lu

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January 12, 2020 Heather Finn STEMCELL Technologies 1618 Station Street Vancouver, BC V6A 1B6

Re: R&D Co-op Student (8 months)

To Heather Finn,

As a passionate and fast-learning problem solver that is well-versed in software development tools and algorithm design, it is with great excitement that I have submitted my resume for consideration for an 8-month R&D intern position with STEMCELL Technologies Vancouver. As an efficient and vocal team-oriented developer I have experience in Android mobile application development, testing, and presentation in addition to Excel business forecasting and logistics to manage important organizational data. I am prepared to contribute to your company's technological goals in developing enticing infographics and job aids and acquiring survey and attendance logistics through programmable software while effectively managing calendars and room bookings.

I am currently in 3<sup>rd</sup> year pursuing a degree in computing science with a specialization in software practice at the University of Alberta. My focus is on using and understanding software on multiple levels, computer architecture, operating systems, and the application of discrete mathematics in algorithm design. Please look at the following project examples from my resume, which outlines the competencies that I can leverage to further the goals of STEMCELL Technologies Vancouver.

- Designed, developed, and tested an elegant and efficient Mood-Tracking Android Studio mobile application in a team of 6 developers using Google maps and Firestore API.
- Created a crime-statistic program with SQLite3 embedded Python with a terminal interface that allows the user to generate graphs and data using Edmonton's crime data.
- Currently developing a custom Arduino lock for a powerlifting gym while listening to customer concerns and criticisms to create newer and improved versions.
- Successfully managed 2 online consulting businesses with a consistent emphasis on customer surveys, and criticism.

My resume provides further detail about the unique skill set and passion I can bring to your team. I truly believe that my experience in programming coupled with my knowledge in excel operation management will allow me to thrive in the STEMCELL R&D environment. I hope we can schedule an appointment to talk, thank you for the consideration.

Sincerely,

Allen Lu