**Allen Peng Lu**

**11120 76 Ave NW** Edmonton, AB. T6G 0J8 || Phone:  604-788-6862|| E-mail:  [aplu@ualberta.ca](mailto:aplu@ualberta.ca)

LinkedIn: <https://www.linkedin.com/in/allen-lu-219115195/>

Skilled in the deployment and maintenance of elegant Android Studio mobile applications. 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, 3rd Year, University of Alberta (Sept 2016 – Scheduled for April 2021)

**Projects**

**Weightlifting Android Studio Project (April 2019 – Present)**

Gravity – Android Mobile App

Github Link: <https://github.com/ApluUalberta/Gravity>

* Android Mobile Phone Application suited for Powerlifting-specific weightlifting
* Utilizes Google Firestore API to keep track of User Data, progress, and achievements
* Creates a game-like achievement system that compares the user’s progress to real Powerlifting Federations statistics
* Plots user work-out numbers that can be found under the user’s profile
* Integrated 1-rep-max calculator that auto-updates the user’s achievements and progress

**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 depending on user input
  + Each Require Additional input, such as year

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

File Instance Generator and Average Plotter

Github Link: <https://github.com/ApluUalberta/LPT-Johnson-Scheduler>

* 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