**Allen Peng Lu**

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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.

**Areas of Expertise**

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| --- | --- | --- |
| * Python | * Java | * Android Studio |
| * Python SQLite3 | * C/C++ | * Mips Assembly |
| * Excel Forecasting Simulations |  |  |

**Education**

* Computing Science, 3rd Year, University of Alberta (Sept 2016 – Scheduled for April 2021)

**Personal Projects**

**Git handle: ApluUalberta**

**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 User’s progress to real Powerlifting Federations
* Plots user work-out numbers on a line graph 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 File instances (-r argument) with Specific format
* Schedules 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