# 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
- Python SQLite3
- Excel Forecasting
- Java
- C/C++
- Android Studio
- Mips Assembly

## Education

- Computing Science, 3rd 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: https://github.com/CMPUT301F19T03/GroupProject1

- 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: 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