

# 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/>

Self motivated computing science student skilled in building and maintaining robust mobile applications with various software tools while meeting stringent time constraints. Well-versed in various algorithm design paradigms using discrete mathematics. Experienced in Object-Oriented design, analysis, and prototyping in teams of 3-6 developers to exercise creativity, initiative, and synergy.

## Core Competencies

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|----------------------|---------|------------------|
| • Python             | • Java  | • Android Studio |
| • Python SQLite3/SQL | • C/C++ | • SQL/SQLite 3   |

## Education

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- 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: <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 and SCRUM to encourage collaboration
- Google Maps and Firestore API to keep track of user data (moods, times, dates, reasons, and location)
- Extensive Design revisioning and development of front-end user interface and testing
- Weekly scrum meetings with agile principles in mind, remote communication with discord, and extensive UML re-versioning
- Required a presentation demo in front of 50 non-technical audience members

#### 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

#### Arduino Powerlifting Lock Box (December 2019 – Present)

Chalk Bowl Locking Mechanism – Arduino Uno

- Programmed Arduino Project to make a Weightlifting Chalk bowl lockable
- 4-digit keypad verification password Solenoid Door lock mechanism with a 6V Relay
- Secured in a locked Plywood container, attached to a hinge and a lid.
- Satisfying customer concerns by continuous prototype iterations to refine proof-of-concept implementation and assess market validation

## Hobbies

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