

# Allen Peng Lu

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Experienced in Object-Oriented design, analysis, and prototyping in teams of 3-6 developers to exercise creativity, initiative, and synergy. Skilled in database programming, while building and maintaining mobile applications while meeting stringent time constraints. Well-versed in various algorithm design paradigms using discrete mathematics.

## Core Competencies

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| • Python             | • Java             | • Android Studio |
| • Python SQLite3/SQL | • Github Workflows | • SQL/SQLite 3   |

## Education

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- Computing Science, 3<sup>rd</sup> Year, University of Alberta (Sept 2016 – May 2021)

## Personal Projects

### Git handle: [AplUalberta](#)

#### 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 front-end unit testing to test and improve UI design and troubleshoot module bugs
- Weekly scrum meetings with agile principles in mind, remote communication with discord, and extensive UML re-versioning and documentation revisioning
- 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/AplUalberta/Crime-Statistics-Database-Program>

- Simple Command Line Interface that allows for 4 complex database queries on a given database
- Embedded SQLITE3/SQL 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