**Allen Peng Lu**

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Self-motivated computing science student experienced in Object-Oriented design, refactoring , analysis, and prototyping in teams of 3-6 developers to exercise creativity in a rapidly changing environment. Skilled in embedded 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 | * C/C++ |
| * Python SQLite3/SQL | * Github Workflows | * SQL/SQLite 3 |

**Education**

* Computing Science, 3rd Year, University of Alberta (Sept 2016 – May 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 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/ApluUalberta/Crime-Statistics-Database-Program>

* Embedded SQLITE3/SQL Queries in Python to create a simple UI
* Simple Command Line Interface that allows for 4 complex database queries on a given database
* 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**

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