Allen Peng Lu

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Self-motivated computer science student skilled in building and maintaining mobile applications while meeting 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.

Core Competencies

- Data Visualization
- Excel data forecasting and simulation
- Android Studio
- C/C++
- Python
- Python SQLite3

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 visually intuitive application in Java, tracks a user's emotional data along with their 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 mood, times, dates, reasons, and location data
  - Extensive UI unit testing for proper database pulling, UI navigation, and feature implementation
- Extensive Revisioning of App Interfaces to provide an eye-pleasing interface with non-functional requirements
- Weekly team meetings, remote communication with discord, and extensive UML re-versioning
  - Time used for optimizing team productivity, monitoring progress, and addressing design flaws.

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 terminal UI for users to easily query a database
- Graphed query data onto pie charts and bar graphs using Pandas and Matplot library functions
  - Examples of functions: Plot.bar(), read_sql_query()
- 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 address design criticism and flaws

Hobbies

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