**Allen Peng Lu**

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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.

**Core Competencies**

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| --- | --- | --- |
| * Python | * Java | * Discrete Mathematics |
| * C/C++ | * Python SQL/SQLite 3 | * Excel Forecasting |

**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 reported emotional state and features intuitive and fluid user interface
* 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)
* Automated Testing using TravisCI and Robotium
* Weekly scrum meetings with agile principles in mind, remote communication with discord, and extensive UML re-versioning using Github pull requests
* Required a presentation demo in front of 50 non-technical audience members

**File-System Simulator (November 2019 – December 2019)**

C++ Operating System HDD file Storage simulation

Github Link: <https://github.com/ApluUalberta/CMPUT379-Assignment-3/tree/master/a3-starter-code>

* C++ program that supports manipulating, and mounting a simulated disk
* Uses superblock inode design to track, create, delete, edit, and read files.
* Supports consistency checks to see if a simulated disk model is eligible to mount
* Allows user to create, delete, write, and edit File directories while supporting basic ls commands

**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 simulates 400,000 Random File instances (-r argument) with specified format
* Schedules 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 LPT/Johnson algorithms and Plots them on 2d, and 3d graphs using GNU Plot to understand the algorithmic speed differences

**Hobbies**

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