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

- Python
- C/C++
- Java
- Python SQL/SQLite 3
- Discrete Mathematics
- 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