Allen Peng Lu

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Skilled in the development and maintenance of elegant mobile applications while meeting time constraints. Experienced in UI and low-level module testing and troubleshooting with Arduino hardware and computer software. Well-versed in various algorithm design paradigms using discrete mathematics. Experienced in Object-Oriented design, analysis, and implementation in teams of 2-6 developers.

Core Competencies

- Python
- Python SQLite3
- Excel Forecasting Simulations
- Java
- C/C++
- Android Studio
- Mips Assembly

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's emotional state and allows them to follow friends
- A collaboration of 6 group members using Github pull requests to encourage collaboration
- Google Maps and Firestore API to keep track of user moods, times, dates, reasons, and location
- Extensive Revisioning of App Interfaces to provide an eye-pleasing interface
- Weekly team meetings, remote communication with discord, and extensive UML re-versioning

Weightlifting Android Studio Project (April 2019 – Present)

Gravity – Android Mobile App

Github Link: https://github.com/ApluUalberta/Gravity

- Android Mobile Phone Application suited for Powerlifting-specific weightlifting
- Utilizes Google Firestore API to keep track of User Data, progress, and achievements
- Creates a game-like achievement system that compares User's progress to real Powerlifting Federations
- Plots user work-out numbers on a line graph that can be found under the user's profile
- An integrated 1-rep-max calculator that auto-updates the user's achievements and progress

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.
- Reliability and testing is done by continuous release and listening to public concerns and design criticisms

Hobbies

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

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January 12, 2020
Heather Finn
STEMCELL Technologies
1618 Station Street
Vancouver, BC V6A 1B6

Re: Software Development Co-op Student (8 months)

To Heather Finn,

As a passionate and fast-learning problem solver that is well-versed in developing software tools, algorithm design, and circuit technology, it is with great excitement that I have submitted my resume for consideration to be an 8-month software development intern with STEMCELL Technologies Vancouver. As an efficient and vocal team-oriented developer I have experience in Android mobile application development, testing, and presentation in combination with my experience designing and programming Arduinos to solve real-world problems. I am prepared to contribute to your company's technological goals in developing and optimizing robotic technologies while performing any risk assessments, design evaluations, and experiments necessary to ensure quality and efficiency.

I am currently in 3rd year pursuing a degree in computing science with a specialization in software practice at the University of Alberta. My focus is on using and understanding software on multiple levels, computer architecture, operating systems, and the application of discrete mathematics in algorithm design. Please look at the following project examples from my resume, which outlines the competencies that I can leverage to further the goals of STEMCELL Technologies Vancouver.

- Designed, developed, and tested an elegant and efficient Mood-Tracking Android Studio mobile application in a team of 6 developers using Google maps and Firestore API.
- Created a crime-statistic program with SQLite3 embedded Python with a terminal interface that allows the user to generate graphs and data using Edmonton's crime data.
- Currently developing a custom Arduino lock for a powerlifting gym while listening to customer concerns and criticisms to create newer and improved versions.
- Created an LPT-Johnson CPU Scheduling performance evaluator by creating 400,000 random file instances with the GNU Plot Software

My resume provides further detail about the unique skill set and passion I can bring to your team. I truly believe that my experience in programming coupled with my knowledge in software and hardware design prototyping will allow me to excel in the STEMCELL software development environment. I hope we can schedule an appointment to talk, thank you for the consideration.

Sincerely,

Allen Lu