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(647)-522-3857

Aman Dureja

Skills

Proficient in: C, Java, Python, HTML5/CSS3, Git
Familiar with: C++, Javascript, VHDL, Flask
Algorithms: Sorting - selection sort, insertion sort, merge sort, quicksort
Searching - linear search, binary search
Other: Object oriented design, Model view controller (MVC) architecture, Software testing

Projects

Side-Scroller Game - bit.ly/amansidescroller **December 2015**

- Designed and built a fluid side-scrolling game using Java in which the player must collect some objects and avoid others while ensuring not to fall off the screen
- Implemented the Runnable interface for multi-threaded function and the KeyListener interface to respond to user input
- Constructed an algorithm to efficiently generate and store random objects to enhance gameplay
- Applied Object Oriented Programming principles to produce well-structured, modular code to create a groundwork for future updates

"GooseRun" Game - bit.ly/gooserun **November 2015**

- Developed an infinite side-scrolling game for the Texas Instruments Launchpad microcontroller and Orbit BoosterPack attachment using C and the Energia IDE
- Gameplay: the player is constantly moving forward and must jump to avoid objects
- Programmed hardware button input and game mechanics in C
- Actively participated in the Software Development Life Cycle, including planning, design, implementation, and testing, to ensure consistent application functionality

C60 - bit.ly/C60HTN ***Hack the North 2015*** **September 2015**

- Designed and created a Pebble smartwatch application using Javascript and Firebase, that allows users to instantly add another user's information to their contacts list
- Implemented critical application functionality by using the Haversine formula to calculate the distance between two latitude/longitude coordinate pairs
- Collaborated with a team of three peers to develop code using the Pebble.JS API and Javascript on the CloudPebble platform

Miscellaneous Utilities - bit.ly/amanprojects

- "TextMe": Python application that employs Flask and the Twilio API to send and receive cellular text messages via the Internet
- "AvailableCourses": Python application that utilizes the University of Waterloo OpenData API and parses JSON to determine which Waterloo courses require an inputted course as a prerequisite

Education

University of Waterloo **September 2015 - April 2020**

- Candidate for Honours Bachelor of Software Engineering, Co-Op

Glenforest Secondary School **September 2011 - June 2015**

- International Baccalaureate (IB) Diploma - 43/45 points (Summa Cum Laude)

Activities

- Participation in hackathons: Hack the North 2015
- Volunteering: Junior Aquatics Instructor at Erin Meadows Community Centre, Mississauga
- Playing guitar
- Fitness: weightlifting, swimming