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ALLEN HUANG

UNIVERSITY OF WATERLOO – COMPUTER ENGINEERING

» SUMMARY

- Skilled in **Java**, **C++**, **R** and **VB** developed through co-op, personal projects and programming courses
- Working Knowledge of **HTML**, **CSS** and **ReactJS** from personal website and WhatBroke web app project
- Familiar with **Git** from management of personal projects and collaboration with others

» SKILLS

LANGUAGES: C++, R, Java, Rcpp, Visual Basic, HTML, CSS
FRAMEWORKS/TOOLS: Git, ReactJS, Bootstrap, Eclipse, Xcode, Slick

» EXPERIENCE

Junior Research Assistant – University of Waterloo Computer Engineering - May 2016 - Present

- Researched and learned numerous unique methods for data driven prognostics from research papers
- Developed and implemented several algorithms for data analysis and machine learning in **R** and **C++**
- Familiar with various branches of machine learning such as, Regression, Markov Models, and Neural Nets
- Benchmarked and optimized code using multi-core programming via **OpenMP** and **doMC**

» PROJECTS

WhatBroke Web App – Hack the North - September 2016

- A digitalized room condition form used by landlords to collect information from new tenants and generate generalized reports along with some analytical analysis for better understanding of the data
- Extensively planned project structure and work distribution for efficient work flow
- Built front-end interface using **ReactJS**, **CSS** and **Bootstrap**

Web Server Simulation - December 2015

- Written in **C++** using **Xcode**
- Processed user's URI requests to calculate expected delay based on URI priority and size
- Obtained URI priority and size from external file using file input/output
- Implemented priority queue when processing user requests based on priority value for each URI

Pedometer App - February 2016

- Created **Android app** that counted steps and displayed a continuous graph of accelerometer data
- Implemented low pass filter algorithm to smooth the function generated
- Designed algorithm for step counting based on patterns observed on graph

Personal Website - September 2015

- Learned **HTML**, **CSS**, and **jQuery** in order to create personal website
- Organized website using Bootstrap and image carousels from Slick for clear content display
- Implemented responsive animations using jQuery to improve user experience

Pacman Game - June 2015

- Written in **Java** using **Eclipse**
- Animated objects using timers to loop through sprites and displayed them using the paint class
- Created pathing algorithm for ghosts to return to spawn location upon death
- Recorded game scores and displayed them from an external file using file input/output