ALLEN HUANG

» SKILLS

LANGUAGES: Java, C++, JavaScript, R, Visual Basic, HTML, CSS, MATLAB **FRAMEWORKS/TOOLS:** Git, React, Android, jQuery, Eclipse, Xcode, Bootstrap

» EXPERIENCE

Junior Research Assistant - May 2016 - Present

- Developed and implemented several algorithms for data analysis and machine learning in R and C++
- Learned various branches of machine learning such as Regression, Markov Models, and Neural Nets
- Familiar with methods for data analysis such as Wavelet Packet Decomposition and Fourier Transform
- Benchmarked and optimized code using multi-core programming via OpenMP and doMC
- Wrote extensive documentation and detailed reports for both code and test results
- Researched and learned numerous unique methods for data driven prognostics from research papers

» PROJECTS

WhatBroke Web App - September 2016

- Created a digitalized room condition form to collect information from tenants and generate reports
- Built front-end interface using ReactJS, CSS and Bootstrap
- Extensively planned project structure and work distribution for efficient work flow

Web Server Simulation - December 2015

- Processed user's URI requests to calculate expected delay based on URI priority and size using C++
- Implemented priority queue when processing user requests based on priority value for each URI

Pedometer App - February 2016

- Created an 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

- Created a replica of the arcade game Pacman as a Java Applet with Object Oriented Programming
- Designed a pathing algorithm for ghosts to return to spawn location upon death
- Animated objects using timers, sprites and displayed them using the Java paint class

» EDUCATION

University of Waterloo – Computer Engineering (2020)

- Excellent Standing in Program
- Courses: Algorithms and Data Structures