Sarah Yeo

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EXPERIENCE

UBC COMPUTER SCIENCE DEPARTMENT | Undergraduate Teaching Assistant
Sept 2014 – Present | Vancouver, BC
- Responsible for running labs, holding office hours, invigilating exams, and grading coursework for CPSC 110 and CPSC 210
- Instructed students by giving short lectures at the beginning of labs, explaining concepts and answering questions about material
- Accountable for enforcing administrative policies and maintaining online question forum Piazza

NSERC UNDERGRADUATE STUDENT RESEARCH AWARD | Undergraduate Research Assistant
May 2015 – Aug 2015 | Vancouver, BC
- Explored concepts in human computer interaction with goals to ease the training process elderly adults undergo when prescribed manual wheelchairs
- Implemented an Android application that used common motivational strategies from the video game industry to gamify the training process
- Worked with the Wiced Sense sensors and SDK to obtain feedback from the physical environment and track wheelchair location
- Supervisor: Ian Mitchell

PERCY NORMAN SWIM CLUB | Swim Coach & Assistant Coach Coordinator
Sept 2013 - Present | Vancouver, BC
- Responsible for planning and leading swim practice for young competitive swimmers
- Accountable for organizing, mentoring and training Assistant Coaches
- Worked closely with other coaches and parents to create a open, inclusive inter-club community through planning and facilitating events such Christmas and Year-End Parties, Time Trials, and Mile Swims

PROJECTS

NEUROEVADERS | Python
Oct 2015 | Vancouver, BC
- Currently working on writing a genetic algorithm capable of training a feedforward neural network how to play a simple clone of Space Invaders.
- Implemented the genetic algorithm using fitness proportionate selection based on stochastic acceptance, one-point crossover and uniform mutation.
- Looking forward to experimenting with different methods of implementing genetic operators and evaluating their effectiveness.

PROTEIN SEQUENCING USING DATABASE SEARCH | Python
Oct 2015 | Vancouver, BC
- Implemented a tool that, given mass spectroscopy data, returns a list of candidate peptides found by conducting a database search and ranking all potential candidates using a logarithmic scoring function.
- Achieved 90 % accuracy when results were compared with a commercial tool.
- Developed as part of the Undergraduate Research Opportunities Conference at the University of Waterloo.

URO REX PROGRAM MENTOR/MENTEE MATCHING | C++, Python
Sept 2015 | Vancouver, BC
- Debugged and tested a program that matched a number of mentees to a mentor given both mentor and mentee preferences using an implementation of the Gale-Shapely algorithm.
- Developed a python script that sanitized data to be used as input for the program.
- Completed as part of duties as URO IT-Coordinator.

DISCOVERING HOST SPECIFIC ADAPTIVE MUTATIONS IN PATHOGENIC ORGANISMS | Python
Mar 2015 | Vancouver, BC
- Developed an analytical pipeline that, given a set of genomic reads isolated from a pathogen, was capable of identifying and ranking mutations by their potential biological significance.

- Pipeline borrowed from the concept of using recurrent mutations to find significant mutations, a technique often used in cancer analysis pipelines.
- Tested and validated the pipeline on Zaire ebolavirus genomes sequenced from the 2014 outbreak in Sierra Leone, West Africa.
- Presented results at the Multidisciplinary Undergraduate Research Conference 2015.

COPS N' ROBBERS | Android, Java
Dec 2014 | Vancouver, BC

- Developed a two-player Android game centered around the idea of a single button game design.
- Available on the Google Play Store with over 300 installs.

COMMUNITY

SPECIAL OLYMPICS VANCOUVER | Swim Coach
Sept 2013 – Present | Vancouver, BC

- Responsible for leading athletes with mental and physical disabilities through interactive activities in the pool, with emphasis on encouragement and positive reinforcement
- Interacted with athletes to help them develop social and developmental skills

SAINT JOHN'S AMBULANCE | Volunteer Medical First Responder
Sept 2013 - Present | Vancouver, BC

- Responsible for providing volunteer first aid at community events, as well as educating the public on the importance of health and safety in daily life
- Holds and maintains valid Medical First Responder (MFR), CPR-HCP and National Lifegaurd Service (NLS) Pool

UBC SCIENCE STUDENT SERVICES | Science Squad Leader
Jan 2015 - Present | Vancouver, BC

- As a senior student leader, assisted with the facilitation of Orientation Leader recruitment and hiring, and organization of Imagine day activities for new-to-UBC students
- Provided support for student leaders through an online skill development training program and in-person training days
- Helped build and maintain a respectful environment for others in all university-related activities

AWARDS

2015
Reginald Palliser-Wilson Scholarship
NSERC Undergraduate Student Research Award
Trek Excellence Scholarship
J Fred Muir Memorial Scholarship

2014
Trek Excellence Scholarship
J Fred Muir Memorial Scholarship
Chancellor's Scholar Designation

2013
Graduation Program Examination Scholarship
BC Government District/Authority Award
Passport to Education Award
Top Academic Graduate (University Transition Program)

2012
Top Academic Year One Student (University Transition Program)

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA
Bsc. Honours Computer Science
Expected June 2017 | Vancouver, BC

- Cumulative GPA: 4.33 out of 4.33
- Science Scholar/Dean's Honour List 2014, 2015
- Relevant coursework: Software Architecture, Data Structures, Operating Systems, Computing Hardware

UNIVERSITY TRANSITION PROGRAM
Early Entrance to University
Sept 2011 - June 2013 | Vancouver, BC

- Core average: 97%
- Accelerated two-year high school program