Victor Xiong

Computer Engineering  
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TECHNICAL SKILLS

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| **Experience with Software** | **Programming Languages** | **Development Environments** |
| * Altera Monitor Program * Git * Microsoft Office Suite * MATLAB | * Java * C * Python * Verilog (HDL) * ARM Assembly * C++ | * Visual Studio * Eclipse * NetBeans * ModelSim (HDL simulator) * Quartus (FPGA design tool) |

ACADEMIC & CO-OP STATUS

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| **Academic Program** | * Computer Engineering; 3 of 8 academic terms completed * Anticipated date of graduation: June, 2021 |

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| **Co-op Status** | * Completed 0/5 work terms; available 4 months, beginning May, 2018 |

TECHNICAL PROJECTS

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| **Interrupts and Preemptive Multitasking (University of British Columbia)** | **November 2017** |

* Wrote interrupt service routines with Altera Monitor Program to support efficient interaction with I/O devices for the ARM Cortex-A9 processor in the Terasic DE1-SOC development kit, resulting in the enabling of multitasking through time slicing

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| **Databases, Queries and Statistical Learning (University of British Columbia)** | **November 2017** |

* Worked with datasets involving lists of restaurants, users and reviews in JSON format, resulting in the construction of a mutable database using Java
* Implemented a k-means clustering algorithm to group together clusters of inputs around centroids. Restaurants were grouped around centroids based on their longitude and latitude positions
* Executed a least squares regression algorithm to predict future trends based on current data. Given the average price of a restaurant, a user’s review for that restaurant would be predicted based on that user’s past reviews.
* Used git to work effectively with a partner on separate branches, thereby preserving a clean master branch
* Constructed a multi-threaded server capable of handling simple requests including support for structured queries
* Wrote grammar for a query language to support structured queries over the constructed database and enable a request-response model (Input was parsed with ANTLR, a parsing generator)

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| **Simple RISC Machine (University of British Columbia)** | **October 2017 - November 2017** |

* Utilized ModelSim and Quartus to build a simple “Reduced Instruction Set Computer” (RISC) with Verilog, thereby gaining a better understanding of the chip functionality for ARM “instruction set architecture”
* Integrated a finite state machine controller and instruction decoder to allow the RISC to support the following instructions: MOV, ADD, CMP, AND, MVN
* Added memory to RISC to store and hold instructions, resulting in an extended RISC Machine interface that supports outside communication with memory mapped I/O
* Expanded the RISC Machine to support branching and conditional branching, a key component of function calls, allowing programs implementing any algorithm within the scope of the memory to be executed

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| **Graph Abstract Data Type Implementations (University of British Columbia)** | **October 2017** |

* Constructed two different representations of a graph interface, thereby gaining a better understanding of the concept of encapsulation
* Implemented Breadth first search and Depth first search algorithms to find the distance, diameter and center of traversed graphs (Graph ADT and algorithms were applied to two datasets)

WORK EXPERIENCE

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| **Infinisia Inc. (Burnaby, British Columbia)**  ***Shipping Department*** | **June 2015 – Present** |

* Trained over fifteen new workers using demonstrative techniques on the shipping and packing process, thereby easing their transition into a new work environment
* Operated heavy machinery such as forklifts and electric pallet jacks, regularly transporting shipments of up to 2300 pounds in weight, resulting in the responsible delivery of shipments

VOLUNTEER EXPERIENCE

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| **Burnaby South Peer Mentoring (Burnaby, British Columbia)**  ***Volunteer*** | **October 2014 – June 2016** |

* Encouraged discussion amongst students regarding societal issues, which helped facilitate a greater understanding within the class of approximately 20 students on ideas of how to better succeed in school
* Mentored a class of younger students and taught provided material by initiating group discussion, creating ideas and defining needs

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| **Burnaby South Badminton Club (Burnaby, British Columbia)**  ***President*** | **September 2014 – June 2016** |

* Organized schedules and logistics by communicating effectively with teachers and staff
* Utilized social media platforms to inform the approximately 50 club members of any announcements

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| **Richmond Animal Protection Society Cat Sanctuary (Richmond, British Columbia)**  ***Volunteer*** | **June 2014 – September 2015** |

* Collaborated on the process of cleaning and maintaining cat enclosures, thereby ensuring a healthy environment for the approximately 500 cats living at the shelter

EDUCATION

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| **University of British Columbia**  ***Computer Engineering*** | **September 2016 – Present** |

AWARDS

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| Artona Scholarship  BC Achievement Scholarship | **2016** |
| AP National Scholar Canada (Score of 4 or higher on 5 AP exams) | **2015** |
| 99th Percentile SAT 2330 – MATH 800; READING 750; WRITING 780 |  |

ACTIVITIES AND INTERESTS

* **Piano** – RCM grade 10 with first class honours
* **Soccer** – Played twelve years, currently in men’s league tier 3
* **Ultimate Frisbee** –High school ultimate frisbee team
* **Running** – Weekly 10km runs
* **Skiing** – Tree runs and moguls