TYLER J. MALLOY

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Education:

University of British Colombia Vancouver (May 2018 anticipated):

I am currently a fourth year student at UBC in a dual degree program pursuing a B.Sc. in Cognitive Systems: Computer Intelligence and Design, and Arts Philosophy.

Technical Experience:

Programming Languages	**Professional**: C++ (QT Framework), Python, Flask, JavaScript /CSS/HTML, SQL (MySQL) MATLAB, Perl. **Project**: Java, R, Octave, NoSQL database (Google Datastore), Python Scikit-Learn. **Educational**: C, Haskell, Prolog, XML, Latex.
Software	R-Commander, VM V-Sphere, Virtual Box, F5 network management, QT Creator, Google Application Engine, Google Endpoints.
Other	**Professional**: UI/UX design, Front/Backend Web Development, GUI Design, Software Test Engineering, Software Development, Object Oriented Programming, Agile Methodology. **Project**: Mobile Application Development, Project Management.

Work Experience:

Research Assistant and Web Developer: University of British Columbia: Centre for Applied Ethics: (May-August 2017)

- Full-stack web development working as the sole programmer on the project.
- Set personal goals and discussed ideal features with professors and other research team members. Developed new features to suit desired goals.
- Analyzed and visualized results from completed surveys and assisted in the creation of papers on the findings of the research.

Software Developer: University of Innsbruck: Institute for Quantum Optics and Quantum Information: (May-December 2016)

- Led development of a lab control software used in quantum optics and spectroscopy physics experiments. Worked in a research environment and managed a team of researchers assisting with the development of the software.
- Used experience from personal projects on UI/UX, GUI design, and python server management in a professional environment.
- Updated collection and storage of experiment data to be compatible with Python and MATLAB data analysis tools used by different project teams.

Software Performance Test Engineer: McKesson Medical Imaging Group: (January-August 2015)

- Developed, maintained, and updated frontend and backend Perl scripts to test application performance for a desktop web application.
- Designed tools for client technical support with little programming knowledge to analyze the performance of the desktop web application.
- Assembled and maintained a server system hosting 60+ virtual machines that ran load, performance, and network balancing tests.

Personal and Technical Projects:

Web Survey Platform: (May 2017 - Current)

- Developed an online survey tool for use in applied ethics research, as well as use by other departments and faculties.
- Worked to develop new features for surveys to enhance the ability of the survey tool in determining user beliefs and opinions.

Video Processing Web Application (2017)

- As a part of NWHacks, worked with a team of 5 students on a 24-hour project to develop a web application to process videos and render low-polygon versions.
- Worked with visual processing libraries like OpenCV and FFmpeg to get optimal performance and allow for a range of different alterations to videos.
- Further developed this project independently to integrate it with other visual processing tools to add new features and further improve performance.

Physics Lab Hardware Control Application: (May – December 2016)

- Worked directly with physics researchers to determine project goals for an application controlling quantum optics physics experiments.
- Coordinated a team of 10 researchers tasked with discovering issues, bugs, and determining areas of future improvement to the application.
- Independently worked on developing new features and solving issues with old features, bugs, and other issues on a C++ QT-framework application.

Relevant Coursework:

- CPSC 303: Numerical Approximation and Discretization
- CPSC 320: Intermediate Algorithm Design and Analysis
- CPSC 322: Introduction to Artificial Intelligence
- CPSC 312: Functional and Logical Programming
- CPSC 340: Machine Learning
- MATH 221: Matrix Algebra: Systems of Linear Equations
- MATH 200: Calculus III: Multiple Integrals with Applications

Awards:

- Student Scholarships totaling in $11,000 tuition grants (2013-2016)
- A- Average in Upper Year courses (82%, 3.8 GPA on 4.33 Scale), Dean's List member (2013, 2016)