

Blaine Lewis

Waterloo, Canada

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Skills

Python JavaScript React Node CSS HTML Java C# PHP Docker SQL Git



Education

PhD, Computer Science - Human Computer Interaction — TBD

September 2019

- Applying for Human Computer Interaction PhD programs to start in September 2019.

MMath, Computer Science Research Thesis — University of Waterloo

January 2017 - Current (January 2019 expected)

- Studying Human Computer Interaction under the supervision of Professor Daniel Vogel and a research assistantship with Professor Andy Cockburn.
- Developing interaction techniques to improve user efficiency by encouraging a transition from novice to expert techniques.
- Course projects: hand pose estimation with OpenCV and commodity cameras, curriculum learning for neural networks in TensorFlow, and a study on trust and emotion in human robot interaction.

BSc with Specialisation in Computer Science — University of Alberta

September 2012 - December 2016

BSc with specialisation in Computer Science. Exchange to University of Sydney.



Publications

Conference Papers

Jingjie Zheng, **Blaine Lewis**, Jeff Avery, and Daniel Vogel. 2018. FingerArc and FingerChord: Supporting Novice to Expert Transitions with Guided Finger-Aware Shortcuts. *In Proceedings of the 31th Annual Symposium on User Interface Software and Technology (UIST '18)*. ACM, New York, NY, USA, 17p.



Experience

Industry

Full Stack Developer — Mad Hatter Technology

September 2016 - Current

Responsible for developing, maintaining, and administering over 50 websites.

- Developed payment modules for Drupal 8 and custom Node web applications.
- Architected and migrated from a monolithic architecture to a Docker container per site.
- Championed company-wide adoption of best practices such as bug tracking and server monitoring.

Program Manager Intern — Bing Ads Microsoft

May - August 2014 and May - August 2015

During two internships shipped 4 features to over 400 users and improved internal piloting process.

- Redesigned the product's core grid controls and designed a feature for exporting visualisations.
- Discovered code dependencies to facilitate switching version control systems to Git.

Networks Researcher — University of Alberta

January - April 2015

Implemented a multiplexing SSH replacement using Python to increase TCP throughput in the presence of packet loss. Coauthor on work presented by Paul Lu at HPCS2015.

Open Source Contributor — Eclipse, Mylyn

September - December 2015

Improved integration of Gerrit code reviews by implementing two-way lookup of tasks and code reviews.

Student Software Developer — Stantec

May - August 2013

Developed a scalable video serving platform on Sharepoint and improved invoicing software in C#.

Developer — Alberta Ingenuity Centre for Machine Learning

July - August 2010 and July - August 2011

- Wrote an OpenStreetMaps implementation in Java with pre-fetching and caching.
- Implemented advanced graph theory and computational geometry algorithms.

Academic

Research Assistant — University of Canterbury, New Zealand

August 2018 - December 2018

Working as a research assistant to Professor Andy Cockburn. Developed and evaluated a technique for improving keyboard shortcut vocabulary.

Instructional Apprentice — University of Waterloo

August 2017 - August 2018

Responsible for managing a team of 5 teaching assistants, preparing and teaching tutorials, and designing course materials for CS 349 User Interfaces.

Teaching Assistant — University of Waterloo

January 2017 - December 2017

Marked assignments and held office hours for User Interfaces and Introduction to Computer Science 2.