

Chris Foster

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Professional Experience

Software Developer

September 2016 - Present | Remote

Two Story Robot Labs Inc.

Javascript developer for multiple in-house SaaS products, and contract development for both government and private organizations. While I primarily focus on development, the contracting positions often require support, research, and mentoring roles. I develop with technologies such as Node.js, AWS, C++, Elasticsearch, RethinkDB, AngularJS, CouchDB, Docker, React, and Redux.

Software Developer

September 2012 - September 2016 | Kamloops, B.C.

MemoryLeaf Media Inc.

Full stack web application developer for multiple company SaaS products, as well as external contracting work for government and private organizations. Primarily worked with Javascript. Developed with technologies such as Node, Backbone, Marionette, jQuery, Elasticsearch, MongoDB, AngularJS, CouchDB, RethinkDB, Docker, and React.

Freelance Web Developer

April 2011 - November 2012 | Kamloops, B.C.

Independent Professional

Freelance web developer for a number of local businesses, organizations, and government entities. Many smaller projects focusing on simple web design for commercial businesses or community outreach, with a few larger projects consisting of full stack web applications made to handle large amounts of data and users. Websites were designed in raw HTML/CSS and web applications built with MySQL, PHP, jQuery, and Backbone.js.

Education

Master of Science

Major in Computing Science

Research in Machine Learning and Computational Neuroscience

September 2016 - June 2018 (expected)

University of Victoria, Victoria, British Columbia

Bachelor of Computing Science

Specialization in Software Engineering

Awarded the TRU Medal of Computing Science for highest graduating GPA

September 2012 - June 2016

Thompson Rivers University, Kamloops, British Columbia

Conference Presentations

Decoding Word Semantics and Learning in EEG Data via an Artificial Language

Conference on Cognitive Computational Neuroscience (September 2017) - New York, USA

This research project utilizes machine learning ridge regressors to predict word vector features based on input EEG data of a subject reading a word. The experiment is designed as a reinforcement learning paradigm, where the subject is viewing a series of symbols with a 1-to-1 mapping to an English word. As the subject learns the mappings we see word semantics begin to correlate to the brain's EEG readings as detected by a standard "2 vs. 2" test.

Response Time Predictions for Stack Overflow

TRU Undergraduate Research & Innovation Conference (March 2017) - Kamloops, Canada

This research project surrounds the investigation of applications for machine learning algorithms on large web datasets. We explore the application of machine learning in the context of developer mailing list data and more modern communities such as StackOverflow and Github. We improve on the work of a paper which predicts response times to Stack Overflow questions and explore ideas for improving the accuracy and applying to alternative datasets.

Tracking Cattle with Infrared Imaging Drones

UBCO Undergraduate Research Conference (April 2015) - Kelowna, Canada

TRU Undergraduate Research & Innovation Conference (March 2015) - Kamloops, Canada

This research project surrounds the development and investigation of a prototype quadcopter automated drone that can fly over ranching fields and identify cattle with a high-quality infrared camera and our custom computer vision algorithm. By utilizing the onboard GPS, we can generate a list of coordinates for the rancher. This is magnitudes cheaper for ranchers than the traditional method.

Scholarships and Awards

President's Research Scholarship

September 2016 - \$4,000

University of Victoria

University of Victoria Fellowship

September 2016 - \$13,500 (Declined)

University of Victoria

Outstanding Graduate Entrance Award

September 2016 - \$5,000

University of Victoria

Canada Graduate Scholarship Master's Award

September 2016 - \$17,500

Natural Sciences and Engineering Research Council of Canada

TRU Alumni Association Award

November 2015 - \$1,200

Thompson Rivers University

British Columbia District Award

November 2012 - \$500

Government of British Columbia

BC Interior Community Foundation Award

October 2012 - \$300

BC Interior Community Foundation

British Columbia Provincial Award

September 2012 - \$1,000

Government of British Columbia

Relevant Volunteer Experience

TRUCS Support Lab

September 2015 - December 2015

Support Lab Volunteer

TRUSU Computer Science Club

November 2014 - June 2016

Board Member - President

TRUSU Computer Science Club

March 2014 - November 2014

Board Member - Vice President

TRUSU Computer Science Club

November 2013 - March 2014

Board Member - Events Coordinator

Startup Weekend Kamloops

June 2013 - July 2015

Assistant Organizer

Community Talks and Presentations

The Fundamentals of Neural Networks

Presented to Victoria Machine Learning Meetup

May 2017

Deep Learning for Self Driving Cars

Presented to Advanced Software Engineering Research Seminar

April 2017

Video Super Resolution with Deep Learning

Presented to Computing Science department

April 2017

SwoopVR: A Web-based Mesh Viewer

Presented to Thompson Rivers University faculty

April 2016

Mining Stack Overflow

Presented to Thompson Rivers University faculty

April 2016

Introduction to Functional Programming

Presented to Computer Science Club members

February 2016

Introduction to Automated Testing

Presented to Computer Science Club members

November 2015

Tracking Cattle with Infrared Imaging

Presented to Thompson Rivers University faculty

May 2015

Introduction to Python

Presented to Computer Science Club members

April 2015

Creating Zero-Knowledge SaaS Applications

Presented to the Okanagan Developers Group

October 2014

Introduction to Git

Presented to Computer Science Club members

October 2014

Introduction to Cryptography

Presented to Computer Science Club members

September 2014

Software Certifications

AWS Certified Solutions Architect Associate

September 2017

Amazon Web Services

MongoDB Developer Course Certification

December 2012

MongoDB Inc.

Machine Learning Course Certification

December 2011

Coursera

Research Interests

- Artificial intelligence, machine learning
- Privacy, applied cryptography, secure communications, and zero-knowledge services
- Software development, open source software, web technologies
- Security in mobile applications, web applications, and networks
- Practical applications of new types of software for fields other than computing science

Personal Achievements

- Placed 10th in the M:18-24 category for Ironman Santa Rosa 2017 Qualifier Triathlon
- Placed 1st in the M:20-24 category for Oliver Half Iron 2016 Triathlon
- Placed 2nd in the M:20-29 category for Kamloops Sprint Sprint 2016 Triathlon
- Placed 3rd in the M:20-29 category for Pavillion Sprint 2015 Triathlon
- Placed 1st in the M:20-29 category for Kamloops Sprint Sprint 2015 Triathlon
- Placed 3rd in the M:20-29 category for Pavillion Sprint 2014 Triathlon
- Placed 1st in the M:16-19 category for Pavillion Sprint 2013 Triathlon

Languages

English

Native Speaker

Esperanto

Limited Working Proficiency