

Kurt Routley

17167 103A Ave, Surrey, BC, V4N 4N7 | Cel: 778-873-5718 | kdr4@sfu.ca

Education:

2013-present Simon Fraser University - Master of Science

- Computing Science Thesis Program
- Research in Artificial Intelligence and Sports Statistics

2008-2012 Simon Fraser University - Bachelor of Science

- Mathematics and Computing Science Joint Major Program

Publications:

2014 IEEE Symposium Series on Computational Intelligence 2014

- "Aggregating Predictions vs. Aggregating Features for Relational Classification" by Oliver Schulte and Kurt Routley

Work Experience:

2015-present Teaching Assistant - Software Engineering I

Simon Fraser University, Burnaby, BC

- Taught second-year students how to program in Objective-C for iOS devices
- Marked assignments in a timely matter while providing useful feedback to students
- Assisted students in a variety of topics related to their project, such as HTTP messaging, GPS integration, debugging skills, and user authentication

2013-present Research Assistant - Computational Logic Lab

Simon Fraser University, Burnaby, BC

- Created a web crawler to retrieve ice hockey data
- Developed a new data structure and reinforcement learning algorithm for evaluating player actions in the National Hockey League
- Performed research on learning Bayesian Networks and optimized code for existing learning software
- Created a Fast Moebius Transform module to improve the runtime of existing modeling applications

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Work Experience (continued):

- | | |
|-------------|---|
| 2014 | AI Programmer (5-month contract)
Carburetor, Vancouver, BC <ul style="list-style-type: none">▪ Enhanced business intelligence software by adding web crawling, data mining, and machine learning capabilities using Ruby on Rails▪ Implemented statistics and decision-making capabilities for company relationship management software▪ Reported project timeline projections to management in weekly update meetings▪ Diligently contributed in a fast-paced startup company environment |
| 2013 | Teaching Assistant - Artificial Intelligence
Simon Fraser University, Burnaby, BC <ul style="list-style-type: none">▪ Responsible for marking assignments and explaining introductory concepts of artificial intelligence to students |
| 2013 | R&D Programmer (8-month contract)
INETCO Systems, Ltd., Burnaby, BC <ul style="list-style-type: none">▪ Updated existing 32-bit internal libraries to a faster 64-bit build environment▪ Created database triggers to store user configurations for personalized transaction management and statistics▪ Optimized TCP message assembly module for faster processing, and extended module to include SQL message assembly▪ Designed and implemented a high-quality module to decode SQL messages according to user specifications▪ Ensured validity of user configurations when upgrading to new software by writing tools to convert user configurations to new specifications during software upgrades▪ Created test tools to parse, convert, and verify CSV and XML configuration files, which allowed the test team to find a number of errors in internal and customer configurations |

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Work Experience (continued):

2012

Junior R&D Programmer (4-month co-op internship)

INETCO Systems, Ltd., Burnaby, BC

- Received NSERC Industrial Undergraduate Student Research Award for research on time synchronization methods with network adapters
- Performed research on new technologies to implement into existing network analysis software
- Implemented Napatech network adapters in data collection software to improve time-stamping precision by a factor of 100 and increase time-stamping accuracies
- Created high-quality TCP/IP library functions to accommodate both IPv4 and IPv6 addresses for use in all company software and prepare INETCO for the world shift from IPv4 to IPv6 addressing
- Engaged in high-scrutiny documentation reviews for Napatech DLLs and TCP/IP library code to verify code efficiency and scalability
- Collaborated with design teams to create a smooth implementation of new technologies
- Updated all company software to include IPv6 support in conjunction with existing IPv4 capabilities
- Performed rigorous testing of new technologies to ensure customer satisfaction and investigated potential bugs with technical support

2010

SQA Test Engineer (8-month co-op internship)

Ericsson, Vancouver, BC

- Executed and debugged automated regression tests for the NetOp Policy Management software
- Reported test results to management and analyzed test results to ensure test cycle targets were met in a timely manner, often completing regression testing weeks ahead of schedule
- Proactively followed up with the development team to resolve bugs found during test cycles
- Improved testing efficiencies for the QA team by developing a Test Servlet using Java, HTML, JavaScript, and XML to queue sets of automated regression tests remotely instead of executing single tests directly on the test machines
- Documented steps for executing automated regression tests and created the user manual for the Test Servlet, as well as trained new members of the India test team in regression test processes

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Work Experience (continued):

- 2011** **Voting Officer**
Elections Canada, Langley, BC
- Verified voter identification cards and ensuring all voting procedures were followed correctly.
 - Reported poll results to supervisors in a timely manner.
- 2009-2010** **Customer Service**
Wendy's Restaurant, Langley, BC
- Prepared customers' orders in a high volume location
 - Ensured the highest hygienic standards in kitchen cleanliness were maintained, which resulted in high health inspection scores
- 2009** **Voting Clerk**
Elections BC, Surrey, BC
- Verified voter identification cards and ensuring all voting procedures were followed correctly.
 - Reported poll results to supervisors in a timely manner.
- 2006-2007** **Student Counselor**
BCIT Computer Summer Camps
- Supervised over 25 students and resolved any technical problems they were having with their programs to ensure they were satisfied with their products
 - Assisted the instructor by completing various administrative tasks related to the camp organization

Project Experience:

- 2010** **Lead Programmer**
Team Kwakki, SFU
- Developed an educational iPhone game for children on the iPhone using Objective-C and XCode IDE
 - Created modules to generate math questions, background audio, and perform collision detection
 - Game trailer: <http://www.youtube.com/watch?v=GHndLGhk7RI>

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Volunteer Experience:

2012-2015 Bookkeeper

Cloverdale Free Presbyterian Church

- Responsible for recording weekly tithes and offerings
- Prepared monthly and year-end financial reports
- Verified all information was correct with accountants and external auditors

2003-2015 Team Lead, Audio/Video Specialist

Cloverdale Free Presbyterian Church

- Recorded sound and webcast weekly church services
- Edited sound for KARI radio broadcasts
- Negotiated with the server team for increased bandwidth and modifying the audio and video encoding to allow high-definition webcasting and recording
- Responsible for training new audio/video technicians in recording and webcasting protocols
- Communicated with webcast viewers regularly to verify webcasting quality

2010-2012 President

SFU Guitar Club

- Hosted club meetings, organize club events and equipment rentals
- Taught other club members advanced playing techniques for guitar

2008 Science Teacher

Thailand Missions Trip

- Taught science lessons at an English camp to 5 classes of 30 students each covering a range of age groups
- Modified lessons as the school day progressed to maximize student understanding and enjoyment

Unpublished Submissions:

2015 MSc Thesis, Simon Fraser University

- "A Markov Game Model for Valuing Player Actions in Ice Hockey" by Kurt Routley. Defense pending

2015 Uncertainty in Artificial Intelligence 2015

- "A Markov Game Model for Valuing Player Actions in Ice Hockey" by Kurt Routley and Oliver Schulte. Review pending

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Awards/achievements:

2014	SFU Travel and Minor Research Award
2014	SFU Graduate Student Society Professional Development Grant
2012	NSERC Industrial Undergraduate Student Research Award
2009-2011	SFU Dean's Honor Roll
2009	SFU Alumni Scholarship
2009	SFU Undergraduate Open Scholarship
2004-2009	FVCJHA Most Sportsmanlike Hockey Player
2008	BC Innovation Council Science Achievement Award
2008	Pacific Academy Academic Excellence Scholarship
2008	SFU Summit Entrance Scholarship
2005	BCIT Summer Computer Camp Award "Most Innovative Developer"
2004	BCIT Summer Computer Camp Award "Best Game Designer"

Skills:

- Proficient in C++, C, Java, and SQL
- Experience with Ruby on Rails, Python, NTPL, C#, Objective-C, HTML5, JavaScript, XML, TCL, and CSS3
- Proficient in Microsoft Word, Excel, PowerPoint, and Visio
- Experience with Visual Studio, Eclipse, XCode, SQL Developer, SQL Server, MySql, PuTTY, and Apache James
- Experience with PC, Linux, and Macintosh OS
- Experience with Subversion, Git, and Mercurial
- Excellent time management and planning skills
- Adept at learning and analyzing new technologies quickly