

Anamaria Crisan MSc, PMP

PhD Candidate - University of British Columbia

✉ acrisan@cs.ubc.ca | 🏠 www.cs.ubc.ca/~acrisan | 🐦 [amcrisan](https://twitter.com/amcrisan)

I have over 5 years of experience in both industry and academic settings. I have developed pipelines and algorithms for the management and analysis of high-throughput genomic data (including next generation sequencing) and have lead translational projects that marry these technologies to clinical frameworks. My primary asset is the ability to envision, implement and especially communicate complex analyses pertaining to large amounts of heterogeneous data. In addition to my research pursuits, my goals are to also actively develop my leadership skills and work in environments that comprise multidisciplinary teams.

At present, I am undertaking a PhD at the University of British Columbia under the joint supervision of Dr. Tamara Munzner (Computer Science) and Dr. Jennifer Gardy (School of Population and Public Health). I am researching data visualization in the context of Public Health data and infectious disease management. My expected graduation date is Sept 2019.

Technical Skills: Bioinformatics, Statistics and Biostatistics, Epidemiology, and Data Mining

Primary Research Areas: Genomics and metagenomics, Infectious Diseases, Cancer, Information Visualization

Research methodologies: Primarily quantitative (statistics), but moving toward mixed methods research

Primary Programming Languages: R and Python

Education

PhD in Computer Science

University of British Columbia

Sep. 2015 - Present
Vancouver, British Columbia

- **Thesis Title:** Bridging gaps in infectious disease research: Developing statistical, computational, and information visualization tools for the interpretation of large-scale genomic and population datasets
- **Supervisors:** Dr. Tamara Munzner (Computer Science) and Dr. Jennifer Gardy (School of Population and Public Health)
- **Awards:** 2015 Canadian Institute of Health Research (CIHR) Vanier Doctoral Award (\$150,000); UBC four year fellowship (\$72,000); IEEE Vis 2016 Doctoral Colloquium(\$1,250 USD); ABPHM Travel Bursary (\$250 GBP)

MSc. in Bioinformatics

University of British Columbia

Sep. 2008 - Sep. 2010
Vancouver, British Columbia

- **Thesis:** Mutation discovery in regions of segmental cancer genome amplifications from next generation sequencing of tumours
- **Supervisors:** Dr. Samuel Aparicio and Dr. Sohrab P. Shah
- **Awards:** CIHR-MSFHR Bioinformatics Training Program Award (\$42,000)
- **Peer-Reviewed Publications:** 1 first author publication, 3 co-authored publications (see publications section)

BSc. in Biomedical Computing

Queen's University at Kingston

Sep. 2004 - Sep. 2008
Kingston, Ontario

- **Awards:** Awards: Nortel Networks Entrance Scholarship (\$4,000); NSERC-USRA (\$8,000); CRA-W Canadian Distributed Mentors Award (\$3,500); Andrina McCulloch Prize in Public Speaking(\$200)

Professional Certification

Project Management Professional

Project Management Institute

Dec. 2012
Vancouver, British Columbia

- Certification in good standing through to December 2018

Experience

Research Experience

Bioinformatician and Biostatistician

British Columbia Centre for Disease Control

Oct. 2013 - Sept. 2015
Vancouver, British Columbia

- **Peer-Reviewed Publications:** 1 first author publication and 1 first author publication under review and 2 co-authored publications
- **Project Themes:** Genomic, Applied Statistics, Analytics, Infectious Diseases, Data Visualization, Workflow Optimization, Distributed Computing

Bioinformatician
GenomeDx Biosciences

Oct. 2010 - Sep. 2013
Vancouver, British Columbia

- **Peer-Reviewed Publications:** 2 first author publications, 5 co-authored publications, and 1 patent
- **Commercial Product:** Decipher Genomic Classifier(www.deciphertest.com)
- **Project Key Words:** Genomics, Applied Statistics (Machine Learning and Biostatistics), Analytics, Cancer, Scientific Liaison, Research and Development

Other Experience

Resident Advisor with Residence Life
University of British Columbia

Oct. 2009 – May 2010
Vancouver, British Columbia

Undergraduate Teaching Assistant
Queen's University at Kingston

May 2007 – Sep. 2007
Kingston, Ontario

Technical Support
Queen's University Information Technology Services

Sep. 2005 – May 2008
Kingston, Ontario

Conference Organization

Website Chair	BioVis (www.biovis.net)	2015 - present
Student Volunteer	Conference on Human Factors in Computing Systems (CHI)	2016

Publications

I have 5 first author and 10 co-authored publications and 1 patent. An up-to-date list of my publications with citation information is available through my Google Scholar profile. You can access these publications electronically by clicking on the publication title.

First Author Publications

★ Indicates that both authors contributed equally to the work

Crisan A, Gardy JL, Munzner T (2016) On Regulatory and Organizational Constraints in Visualization Design and Evaluation. *Proceedings of the Sixth Workshop on Beyond Time and Errors on Novel Evaluation Methods for Visualization*

Crisan A, Wong HY, Johnston JC, Tang P, Colijn C, Otterstatter M, Hiscoe L, Parker R, Pollock SL, Gardy JL (2015) Spatio-temporal analysis of tuberculous infection risk among clients of a homeless shelter during an outbreak. *The International Journal of Tuberculosis and Lung Disease*

Alshalalfa M★, **Crisan A**★, Vergara IA, Ghadessi M, Buerki C, Erho N, Yousefi K, Sierocinski T, Haddad Z, Black PC, Karnes RJ, Jenkins RB, Davicioni E (2014) Clinical and genomic analysis of metastatic prostate cancer progression with a background of postoperative biochemical recurrence. *BJU international*

Erho N★, **Crisan A**★, Vergara IA, Mitra AP, Ghadessi M, Buerki C, Bergstralh EJ, Kollmeyer T, Fink S, Haddad Z, Zimmermann B, Sierocinski T, Ballman KV, Triche TJ, Black PC, Karnes RJ, Klee G, Davicioni E, Jenkins RB (2013) Discovery and validation of a prostate cancer genomic classifier that predicts early metastasis following radical prostatectomy. *PLOS ONE*

Crisan A, Goya R, Ha G, Ding J, Prentice LM, Oloumi A, Senz J, Zeng T, Tse K, Delaney A, Marra MA, Huntsman DG, Hirst M, Aparicio S, Shah SP (2012) Mutation discovery in regions of segmental cancer genome amplifications with CoNAN-SNV: a mixture model for next generation sequencing of tumors. *PLOS ONE*

Co-authored Papers

Miller RR, Langille MG, Montoya V, **Crisan A**, Stefanovic A, Martin I, Hoang L, Patrick DM, Romney M, Tyrrell G, Jones SJ, Brinkman FS, Tang P (2016) Genomic Analysis of a Serotype 5 *Streptococcus pneumoniae* Outbreak in British Columbia, Canada, 2005 - 2009. *Canadian Journal of Infectious Diseases and Medical Microbiology*

Hatherell H, Didelot X, Pollock SL, Tang P, **Crisan A**, Johnston JC, Colijn C, Gardy JL (2016) Declaring a tuberculosis outbreak over with genomic epidemiology. *Microbial Genomics*

Cooperberg MR, Davicioni E, **Crisan A**, Jenkins RB, Ghadessi M, Karnes RJ (2015) Combined value of validated clinical and genomic risk stratification tools for predicting prostate cancer mortality in a high-risk prostatectomy cohort. *European urology*

Ross AE, Feng FY, Ghadessi M, Erho N, **Crisan A**, Buerki C, Sundi D, Mitra AP, Vergara IA, Thompson DJ, Triche TJ, Davicioni E, Bergstralh EJ, Jenkins RB, Karnes RJ, Schaeffer EM (2014) A genomic classifier predicting metastatic disease progression in men with biochemical recurrence after prostatectomy. *Prostate cancer and prostatic diseases*

Karnes RJ, Bergstralh EJ, Davicioni E, Ghadessi M, Buerki C, Mitra AP, **Crisan A**, Erho N, Vergara IA, Lam LL, Carlson R, Thompson DJ, Haddad Z, Zimmermann B, Sierocinski T, Triche TJ, Kollmeyer T, Ballman KV, Black PC, Klee GG, Jenkins RB (2013) Validation of a genomic classifier that predicts metastasis following radical prostatectomy in an at risk patient population. *The Journal of urology*

Feng FY, Ghadessi M, Davicioni E, **Crisan A**, Erho N, Mitra AP, Triche TJ, Jenkins RB, Ross AE, Schaeffer EM (2013) Validation of a Genomic Classifier That Predicts Metastatic Disease Progression in Men With Biochemical Recurrence Post-Radical Prostatectomy. *International Journal of Radiation Oncology Biology Physics*

Shah SP, Roth A, Goya R, Oloumi A, Ha G, Zhao Y, Turashvili G, Ding J, Tse K, Haffari G, Bashashati A, Prentice LM, Khattra J, Burleigh A, Yap D, Bernard V, McPherson A, Shumansky K, **Crisan A**, Giuliany R, Heravi-Moussavi A, Rosner J, Lai D, Birol I, Varhol R, Tam A, Dhalla N, Zeng T, Ma K, Chan SK, Griffith M, Moradian A, Cheng SW, Morin GB, Watson P, Gelmon K, Chia S, Chin SF, Curtis C, Rueda OM, Pharoah PD, Damaraju S, Mackey J, Hoon K, Harkins T, Tadigotla V, Sigaroudinia M, Gascard P, Tlsty T, Costello JF, Meyer IM, Eaves CJ, Wasserman WW, Jones S, Huntsman D, Hirst M, Caldas C, Marra MA, Aparicio S (2012) The clonal and mutational evolution spectrum of primary triple-negative breast cancers. *Nature*

Roth A, Ding J, Morin R, **Crisan A**, Ha G, Giuliany R, Bashashati A, Hirst M, Turashvili G, Oloumi A, Marra MA, Aparicio S, Shah SP (2012) JointSNVMix: a probabilistic model for accurate detection of somatic mutations in normal/tumour paired next-generation sequencing data. *Bioinformatics*

Vergara IA, Erho N, Triche TJ, Ghadessi M, **Crisan A**, Sierocinski T, Black PC, Buerki C, Davicioni E. (2012) Genomic dark matter in prostate cancer: exploring the clinical utility of ncRNA as biomarkers. *Frontiers*

Goya R, Sun MG, Morin RD, Leung G, Ha G, Wiegand KC, Senz J, **Crisan A**, Marra MA, Hirst M, Huntsman D, Murphy KP, Aparicio S, Shah SP (2010) SNVMix: predicting single nucleotide variants from next-generation sequencing of tumors. *Bioinformatics*

Patents

Buerki C, **Crisan A**, Davicioni E, Erho N, Ghadessi M, Jenkins RB, Vergara IA (2013) *Cancer diagnostics using biomarkers*

Talks

A selection of talks delivered during my PhD. Talk slides are available on my website: www.cs.ubc.ca/~acrisan

Data Visualization Module **May. 2017**
Canadian Bioinformatics Infectious Disease Genomic Epidemiology Vancouver, British Columbia

Visualizing Public Health Data **Dec. 2016**
Mini Symposium - Integrated Rapid Infectious Disease Analysis Project Burnaby, British Columbia

What is Data Visualization & How Can You Use It in Your Daily Work? **Nov. 2016**
Evening Rounds – BC Patient Safety & Quality Control Council Vancouver, British Columbia

On Regulatory and Organizational Constraints in Visualization Design and Analysis **Oct. 2016**
Beyond Time and Errors: Novel Evaluation Methods for Visualization Baltimore, Maryland

Bridging the Gaps in Tuberculosis Research: A Public Health Data Visualization Problem **Oct. 2016**
VIS Doctoral Colloquium - IEEE VIS Conference Baltimore, Maryland

Visualizing Public Health Data **June 2016**
Grand Rounds – BC Centre for Disease Control Vancouver, British Columbia