

Robert Lesurf

Senior Bioinformatician, Data Scientist

Personal Information

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Technical Skills

Bioinformatics

Genomics

Data Analysis

Machine Learning

Statistical Modeling

Data Visualization

Cluster Computing (SGE, HPCI)

Version Control (Git, SVN)

Fluent in English & French

Programming Languages

R

Python

Perl

HTML

Java

SQL

Unix

Soft Skills

Leadership

Critical Thinking

Problem Solving

Decision Making

Teamwork & Collaboration

Oral & Written Communication

Organized professional with over a decade of bioinformatics and machine learning experience. Distinguished leadership resulting in the completion and publication of seventeen peer-reviewed scientific studies. I have a passion for data analysis, visualization, problem solving, and summarizing results to broad audiences.

Experience

2019-Present Senior Bioinformatician, Data Scientist

The Hospital for Sick Children (SickKids), Toronto, ON, Canada

- Identifying genomic variants that cause heart disease in children, and the influence of these variants on disease severity and outcome.

2016-2019 Bioinformatician, Data Scientist

Ontario Institute for Cancer Research, Toronto, ON, Canada

- Led team in developing a genomics data analysis pipeline, bringing software tools into a unified framework for automated quality control and analysis of sequencing data.
- Developed machine learning pipeline to increase accuracy of diagnostic and prognostic biomarkers in prostate cancer. Produced and assessed over 120 million computational classifiers to identify optimal sets of molecular data types, gene features, and model parameters for validation.
- Led and co-analyzed several other bioinformatics research projects, including identifying tumor evolution patterns in glioma and determining the role of transposable genomic elements in the landscape of prostate cancer.

2014-2016 Postdoctoral Research Associate

McDonnell Genome Institute, Washington University, St. Louis, MO, USA

- Led genomics analysis for clinical trial of breast cancer, computationally identified genomic and transcriptional features predictive of drug response.
- Designed a 'regulome' capture targets in partnership with Roche.
- Built data visualization functions for the GenVisR R package.
- Mentored students and junior employees.

Education

2008-2014 Ph.D. - McGill University, Montreal, QC, Canada

Biochemistry (Bioinformatics option)

- Used machine learning and microarray data to identify and predict early stage breast cancer patients who may be safely spared therapy.
- Developed visualization algorithms for genomic signatures across tumours.

2006-2008 M.Sc. - McGill University, Montreal, QC, Canada

Computer Science (Bioinformatics option)

- Identified genomic features of mouse models for human cancer.

2002-2006 B.Sc., Honours - Queen's University, Kingston, ON, Canada

Biomedical Computing

- Developed computational models for diagnosing prostate cancer.

Contributions

2019- Play Director for the Toronto Gay Hockey Association (TGHA).

2016-2019 Scientific peer-reviewer (*Genome Biol, Mol Oncol, Brief Bioinform*).

2008-2019 Published seventeen peer-reviewed scientific papers.

2010-2016 Two international conference oral presentations, six poster presentations.

Awards & Honours

2017 Top peer-reviewed publication of the year (Oslo University Hospital).

2010-2013 Breast cancer research doctoral fellowship (US Department of Defense).

2006-2008 Postgraduate master's scholarship (NSERC).

2002-2006 Dean's honour list, four years in a row (Queen's University).