Robert Lesurf

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 sixteen peer-reviewed scientific studies. I have a passion for data analysis, visualization, problem solving, and summarizing results to broad audiences.

Experience

2016-Present **Bioinformatician, Data Scientist**
Ontario Institute for Cancer Research, Toronto, ON, Canada
- Leading team in developing a genomics data analysis pipeline. This brings software tools into a unified framework for automated quality control and analysis of sequencing data. Current focus is to Dockerize pipeline components for data processing using cloud computing.
- 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

2016-2018 Scientific peer-reviewer (Genome Biol, Mol Oncol, Brief Bioinform).
2008-2017 Published sixteen 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).
2002 National biology scholar (University of Toronto).
2002 Governor General's Academic Medal (Governor General of Canada).