Robert Lesurf

Data Scientist, Bioinformatician

Personal Info:

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Technical Skills:

Machine Learning
Data Analysis
Statistical Modeling
Data Visualization
Bioinformatics
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 machine learning and data analysis experience. Distinguished leadership resulting in the completion and publication of sixteen peer-reviewed scientific studies. I have a passion for tackling complex challenges, finding computational solutions, and summarizing results to broad audiences.

Experience

2016-Present — **Data Scientist, Bioinformatician**
Ontario Institute for Cancer Research, Toronto, ON, Canada

- Developed machine learning pipeline to increase accuracy of diagnostic and prognostic biomarkers in prostate cancer. We've identified optimal sets of data types and parameters for use with our next project phase.
- Leading team to maintain an in-house, Perl-based genomics analysis pipeline. This ties together software tools into a unified framework for automated processing and QC of data. It uses SGE to parallelize processes onto either the compute cluster at our institute or AWS servers.
- Led and co-analyzed several other cancer 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 HER2-positive breast cancer. Identified several features predictive of drug response.
- Designed a gene capture reagent in partnership with NimbleGen/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 to identify and predict early stage breast cancer patients who may be safely spared therapy.
- Developed visualizations for genomic signatures in cancer samples.

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 machine learning models for diagnosing prostate cancer.

Contributions

2016-2017 Scientific peer-reviewer (Genome Biology, Molecular Oncology).
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).