

Mark Halverson, PhD

DATA SCIENTIST

Dual US/Canadian citizen

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[LinkedIn profile](#)

[GitHub](#)

SKILLS

Languages: Python/ Pandas, R, Matlab, bash, MySQL, PySpark, Hadoop

Machine learning libraries: scikit-learn, Keras/Tensorflow

Visualization: Tableau, Matplotlib, Plotly

Collaborative software: Git, Jira, Confluence

Analysis: machine learning classification and regression algorithms, NLP, hyperparameter optimization, PCA, time series analysis, digital filters, hypothesis testing, curve fitting, network theory

PROFILE

I love that moment when it makes sense; that is, when an analysis uncovers patterns and relationships from amongst the noise and piles of data files. As a data scientist that has worked in marine physics and astrophysics, I have amassed substantial experience in wrangling, analyzing, visualizing, and interpreting data. How can I help your organization bring meaning to data to solve business challenges?

EXPERIENCE

Physical Oceanographer | RBR LTD

OCT 2016 - JUN 2020, OTTAWA, ON & VANCOUVER, BC

- Led the development of a Matlab software toolbox to provide customers the ability to read, process, and visualize data from RBR's instruments
- Developed data post-processing sequence using signal analysis to recover information lost by the dynamic response of sensors
- Managed a team of three scientists using project management tools such as Jira and Confluence
- Created annual work plans for my team to align our work with organizational priorities

Research Associate | University of British Columbia

JAN 2013 - OCT 2017, VANCOUVER, BC

- Applied spectral methods, principal component analysis, and harmonic analysis to multispectral satellite imagery and 3D vector datasets of water circulation
- Mentored graduate and undergraduate students

Hydrological Applications Specialist | Environment Canada

MAY 2013 - DEC 2015, VANCOUVER, BC

- Aggregated and analyzed stream flow data from British Columbia
- Pioneered the use of complex network theory as a tool to analyze stream flow gauge networks ([Halverson and Fleming, 2015](#))

EDUCATION

BrainStation | Diploma in Data Science

SEP - DEC 2020, VANCOUVER, BC

University of British Columbia | PhD in Phys. Oceanography

JAN 2003 - JUN 2009, VANCOUVER, BC

University of Wisconsin | MSc in Astrophysics

SEP 2000 - MAY 2002, MADISON, WI

University of Minnesota | BSc Summa Cum Laude Physics, BSc Summa Cum Laude Astronomy

SEP 1997 - MAY 2000, MINNEAPOLIS, MN

PROJECTS

BrainStation capstone: *Predicting bicycle accident outcomes in urban environments*

OCT 2020 - DEC 2021, BrainStation

- Built an accurate machine learning model to predict the outcome of bicycle crash outcomes in urban areas using historical police records.