JesFord

Data Scientist

contact

jesfordphd@gmail.com
linkedin.com/in/jesford
206.446.6874

website

jesford.github.io

GitHub

@jesford

tech skills

♥ Python (expert)
Jupyter, Pandas, NumPy, Scikit-Learn, SciPy, Matplotlib, Seaborn

Git
GitHub
SQL
R
Travis-CI
Bash/csh
cron
C/C++
IDL
Sphinx
HTML/CSS
Django
AWS
LaTeX
OS X
Linux

education

Ph.D. in Physics, 2015
University of British Columbia

B.Sc. in Physics, 2008
Minor in Mathematics
University of Nevada, Reno

profile

Data Scientist specializing in Python, machine learning, experimental design, practical statistics and problem solving. I enjoy writing clean robust code with thorough documentation, exploring new methods and technologies, and teaching others the tools to work more efficiently.

experience

2016–now **Backcountry.com** Park City, UT
Data Scientist

- Advanced in-house algorithm for cross-channel attribution, incorporating *off-line* customer behavior to inform optimal marketing bid adjustments.
- Measured incremental sales impact of novel customer service initiatives against holdout customer pool created using nearest neighbors.
- Led design, execution, & measurement of tests to optimize salesperson interactions via customer segmentation, product taxonomy, method and timing of contact, using resampling methods and hypothesis testing.
- Automated processes and nightly builds of database summary tables to enforce reproducibility and reduce reporting time for analysts by 99%.
- Built Python package (cx_Oracle wrapper) for easily interfacing with Oracle DB from Python, removing multi-tool headache for analytics teams.
- Pulled and aggregated messy data from diverse sources (Oracle DB, Adobe Analytics, third-party APIs, Google Trends, Social Media), and worked across departments to enforce data quality standards.
- Measured sales impact of activities performed by customer service department using multivariate linear regression.
- Facilitated knowledge transfer, and reduced detrimental effects of employee turnover, by organizing GitLab Groups and teaching best practices for documentation and version control.
- Founded and led bi-weekly tutorial and workshop series to elevate technical skills among Backcountry analysts and engineers.

2015–2016 **eScience Institute, University of Washington** Seattle, WA
Data Science Postdoctoral Fellow

- Author of Python package for statistical modeling of galaxy clusters.
  - github.com/jesford/cluster-lensing
- Machine Learning algorithms for hazardous asteroid detection.
- Mentor for the Data Science for the Social Good summer program.
- Invite-only Hackathon by DataKind, addressing Seattle traffic safety.

2009–2015 **University of British Columbia** Vancouver, BC
Research Assistant (Graduate Student)

- Complex model building, fit optimization, bootstrapping, systematic bias testing, uncertainty estimation and propagation, parallel processing.
- Champion for open data, publicly released 2 new astronomical catalogs.

2007 **NASA Jet Propulsion Laboratory** Pasadena, CA
Summer Undergraduate Research Fellowship: ran simulations for scientific mission cost-benefit analysis & publicly released the datasets.

mentorship & teaching

2016 **Data Science Mentor** — Data Science for the Social Good, UW
Predicting food-borne illnesses from online reviews & social media

2015–2016 **Software Carpentry Instructor** — Seattle & Vancouver, BC
Teaching technical computing skills to scientists, including Python, Git/GitHub, and Bash; certified Software Carpentry Instructor since April 2016

2013–2014 **Future Science Leaders Fellow** — Science World, Vancouver
Mentoring exceptional high school students in physics & astronomy projects

2010–2015 **Presentations & Outreach** — UBC
Developed, lead, & open-sourced dozens of classroom science activities

2009–2014 **Academic Teaching** — UBC
Taught undergraduate physics courses; mentored other graduate instructors

awards

2015 **Data Science Postdoctoral Fellowship** — eScience Institute, UW
Moore/Sloan Data Science & WRF Innovation in Data Science Fellowship

2011 **Four-Year-Fellowship** — Department of Physics & Astronomy, UBC
Awarded to the top doctoral students

2009 **Graduate Entrance Scholarship** — Department of Physics & Astronomy, UBC
Awarded to the top incoming graduate students

2008 **Regents' Scholar Award** — University of Nevada
$5000 prize awarded annually to a single student "in recognition of outstanding academic achievements, leadership ability, & service contributions"

2008 **Westfall Scholar Award** — Department of Physics, University of Nevada
Award for the highest GPA in Physics

leadership

2017 **Co-organizer: Salt Lake PyLadies** — Salt Lake City, UT
Organizer and contributor to the local chapter of PyLadies, an international mentorship group for women who code in Python

2015 **Site Host: Software+Data Carpentry Instructor & Helper Retreat** — Seattle, WA
Organized and hosted the Seattle site for this worldwide event on improving teaching techniques and workshop materials

2013 **Lead Organizer: Graduate Student Career Workshop** — Vancouver, BC
Coordinated full-day workshop for Canadian Astronomical Society conference

2012–2014 **Coordinator: Cosmology Group Weekly Seminar** — UBC

publications & presentations

- 9 peer-reviewed journal publications, including 5 first-author publications
- More than 25 conference & academic presentations, including 6 invited talks

interests

Snowboarding (former sponsored athlete), hiking, softball, disc golf, camping, music