Jason Preszler

DATA SCIENTIST

Seattle, WA

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Skills

Languages	Python, R, SQL, C, C++
Databases	SQLite, Postgres, Neo4j, MongoDB
Expertise	Bayesian modeling, mixture models, clustering, graph theory
ML Experience	linear/logistic regression, glm, random forest, knn, svm, time series analysis, optimization, bag of words, LDA
Tools	Linux, git, Shiny, Flask, OpenMP, LaTeX, HTML, CSS

Experience

Data Science Fellow *Seattle, WA*

INSIGHT DATA SCIENCE *June 2019 - PRESENT*

- Created RealAllocator, a web-app that provides an optimal portfolio allocation with direct real estate investment resulting in 5% higher yield in tests. Done in consultation with RealCrowd for use by financial advisors and being integrated into online risk assessment tool. **Optimization** procedure uses **spectral clustering** and **Bayesian** techniques to determine optimal portfolio. Built using **sklearn, PyMC3, Flask**, and deployed via Heroku.
- Created and ran workshops on object-oriented programming, software engineering, and unit testing for data scientists. All were very positively received.

Assistant Professor *Caldwell, ID*

THE COLLEGE OF IDAHO *Aug. 2017 - May. 2019*

- Lead technical development on cross-functional team to maximize student success and graduation rates by eliminating wasteful resource allocation. Gathered, cleaned, and visualized messy data from multiple sources into easily accessible and digestible formats for use by non-technical faculty and administration. Resulted in the removal of 150 rarely offered courses, reduced gen. ed. req. by 10%, and reduced scheduling bottlenecks in 75% of academic programs.
- Employed ML techniques (**logistic regression, random forest, knn**) to identify polynomials with special properties previously only found via brute-force; identified patterns and presented results at statistics conference. Used **C/OpenMP** to generate data on over 33 million polynomials to obtain 75 positive cases for classifiers.
- Developed and taught popular courses in applied databases, regression analysis, discrete mathematics, and data visualization.

Mathematics Coordinator *Harrisonburg, VA*

JAMES MADISON UNIVERSITY *July 2015 - June 2017*

- Developed usage forecasts and tutor scheduling model for drop-in tutoring center and steered budget requests. This resulted in the first significant budget increase in 7 years, additional tutors lead to increased visitation and decreased complaints about lack of tutor availability. Pulled data from database, imputed missing values, and created numeric and graphical summaries. Constructed **time series forecasts** (**ARIMA** and **STL**) of visitation in 4 subjects to underpin staffing and budget models.
- Hired, trained, and supervised ~ 20 undergraduate math and statistics tutors who ~ 4000 visitors each semester.

Visiting Assistant Prof. *Tacoma, WA*

UNIVERSITY OF PUGET SOUND *July 2012 - June 2015*

- Supervised research projects in computational, probabilistic, and algebraic number theory which resulted in conference presentations.
- Hired and supervised ~ 10 undergraduate math and computer science tutors.
- Taught over 300 students in 12 distinct courses including algorithms, computer architecture, and linear algebra.

Education

Ph.D. in Mathematics *Salt Lake City, UT*

UNIVERSITY OF UTAH *Aug. 2009*

M.S. in Mathematics *Salt Lake City, UT*

UNIVERSITY OF UTAH *May 2005*

B.S. in Mathematics, Computer Science Minor *Tacoma, WA*

UNIVERSITY OF PUGET SOUND *Dec. 2002*