Tyler Wied

Seattle, WA
(920) 634-9618

tjwied@gmail.com
LinkedIn: tylerwied
GitHub: tjwied

Data Science Skills

- **Programming**: Python, SQL, R, Unix/Bash
- **Machine Learning**: supervised (logistic & linear regression, random forests, SVM), unsupervised (PCA, k-means clustering), natural language processing, network analysis, simulations
- **Statistics**: experimental design, bootstrap, ANOVA, χ^2 tests, A/B tests
- **Tools**: pandas, scikit-learn, NumPy, Jupyter, Matplotlib, Seaborn, Git, gensim, NLTK, Dash, MPI

Experience

- **Insight Data Science** — Seattle, WA
  Data Science Fellow — *Jan 2019 - Present*
  - Consulted for a hedge fund to identify key trends across five major cryptocurrencies.
  - Developed project roadmap and architected solution using **machine learning** (NLP, topic modeling, sentiment analysis, network analysis).
  - Delivered results in an interactive dashboard that displays networks, attitude levels, and the top 20 topics across **200k+ Tweets and 25k+ Twitter users**.
- **Johns Hopkins University School of Medicine** — Baltimore, MD
  Post-Doctoral Research Fellow & PhD Candidate — *2012 - 2019*
  - Discovered important flexibility in a protein essential for cognitive function from **10+ TB of simulation data**, numerical analysis, and **unsupervised machine learning** (PCA).
  - Developed algorithm to **automatically classify** millions of simulation "snapshots" into a small number of discrete states to create simple, interpretable models.
  - Wrote Python scripts to validate simulation results with respect to real-world observations using statistical tests (χ^2 test), resulting in **6-fold improvement** over previous predictions.
  - Achieved 10x simulation speed-up by **parallelizing** jobs on cluster compute nodes (MPI).
  - Collaborated cross-functionally to identify promising targets in a toxin study by combining diverse datasets and identifying key features, **reducing search space more than 90%.**
  - Trained and led a team of undergraduate and graduate students across four research projects.
- **University of Wisconsin-Madison** — Madison, WI
  Research Assistant — *2009 - 2012*
  - Developed first genetic mouse model of mania, which is now used to understand mania in humans.
  - Identified **15+ statistically significant** indicators of mania (one-way ANOVA).
  - Isolated the individual contributions of key features affecting DNA stability across more than 50 experimental conditions in MATLAB, enabling prediction with those features in future studies.

Education

- **Johns Hopkins University School of Medicine** — Baltimore, MD
  PhD, Biophysics (National Science Foundation Graduate Research Fellow) — *2012 – 2018*
- **University of Wisconsin-Madison** — Madison, WI
  BS, Biochemistry (Honors in Research) — *2008 – 2012*