Tyler Wied

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Data Science Skills

- **Languages**: Python, SQL, R, bash
- **Machine Learning & Statistics**: Supervised and unsupervised learning, Dimensionality Reduction, Natural Language Processing, Network Analysis, Feature Engineering, Modeling and Simulations, Time Series, Monte Carlo, bootstrap, ANOVA, χ^2 test, A/B testing
- **Tools**: NumPy, pandas, Git, Scikit-learn, gensim, Nltk, Dash, Jupyter, Matplotlib
- **Computing**: High-performance and parallel computing, Unix, SSH

Experience

- **Insight Data Science** — Seattle, WA
  Data Science Fellow — *Jan 2019 - Present*
  - Consulted for a cryptocurrency hedge fund to build a webapp that uses **machine learning** approaches to structure messy Twitter data related to cryptocurrencies by identifying trending accounts, topics, and community-level attitudes.
  - **Scraped and cleaned 200k+ Tweets** and used network analysis to identify relevant accounts and used topic modeling and senitment analysis to identify new trends for **5 different cryptocurrencies**.
  - Built interactive dashboard that enables clients to visualize networks and related topics.
- **Johns Hopkins University School of Medicine** — Baltimore, MD
  Post-Doctoral Research Fellow & PhD Candidate — *2012 - 2019*
  - Collected and processed **10+ TB of data** from simulations of proteins. Conducted numerical analysis to **classify** simulation snapshots into discrete states and used **unsupervised machine learning** to identify major axes of motion.
  - Wrote **custom Python scripts** to compare simulation data with real-world observations, resulting in a **6-fold improvement** over previous approaches.
  - Delivered data-driven recommendations for future toxin research from analysis of a mutation and simulation datasets, **reducing search space more than 90%.**
  - Built a pipeline to simultaneously run hundreds of simulations on cluster compute nodes.
  - Developed and executed four independent research projects.
  - Trained and led a team of undergraduate and graduate students. Served as tutor to 15+ students in two graduate-level biophysics courses.
- **University of Wisconsin-Madison** — Madison, WI
  Undergraduate Research Assistant — *2009 - 2012*
  - **Conducted behavioral experiments** for 15+ measures of hyperactivity to develop a line of manic mice. Performed statistical tests to identify differences between control and experimental mouse groups.

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*