# 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 methods, bootstrap, ANOVA, $\chi^2$ 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** <span style="float:right">Seattle, WA</span>

  *Data Science Fellow* <span style="float:right">Jan 2019 - Present</span>
  - 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** <span style="float:right">Baltimore, MD</span>

  *Post-Doctoral Research Fellow & PhD Candidate* <span style="float:right">2012 - 2019</span>
  - 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** <span style="float:right">Madison, WI</span>

  *Undergraduate Research Assistant* <span style="float:right">2009 - 2012</span>
  - **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** <span style="float:right">Baltimore, MD</span>

  *PhD, Biophysics (National Science Foundation Graduate Research Fellow)* <span style="float:right">2012 – 2018</span>

- **University of Wisconsin-Madison** <span style="float:right">Madison, WI</span>

  *BS, Biochemistry (Honors in Research)* <span style="float:right">2008 – 2012</span>