Brendan Hasz

Ph.D Candidate in Neuroscience

Brendan Hasz
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Summary

Doctoral candidate in Neuroscience with strong programming and statistics background. Experienced with using machine learning methods and Bayesian statistics to solve complex problems involving high levels of uncertainty.

Education

University of Minnesota / Ph.D. Candidate in Neuroscience
August 2013 - Present, Minneapolis, MN

Brandeis University / B.S. in Computer Science and Neuroscience
September 2009 - May 2013, Waltham, MA

Experience

University of Minnesota / Graduate Assistant
August 2013 - Present, Minneapolis, MN

- Built a high-performance hierarchical clustering algorithm in C.
- Wrote a custom kernel-density-based decoder of neural activity in Python using Numba.
- Fit Bayesian reinforcement learning algorithms to animal behavior in Python using Stan.
- Predicted rat choices from neural activity using machine learning approaches in Matlab.
- Performed Bayesian model comparison on neural data in R.

AnalyzeThis! and Social Data Science / Competition Participant
October 2016 - Present, Minneapolis, MN

- Engineered features in Python to evaluate visitor behavior for Social Data Science's collaboration with the Science Museum of Minnesota.
- Worked with a team to build a regression model for the AnalyzeThis! Sports Analytics challenge, and placed fourth.

Brandeis University / Computational Neuroscience Trainee
May 2012 - May 2013, Waltham, MA

- Wrote simulations of neural networks in C.
- Performed dynamical system analyses of simulation outputs in Matlab.

Skills

- **Languages:** Python, C, Matlab, R, and SQL.
- **Technical skills:** data cleaning and analysis, clustering, machine learning, reinforcement learning, Bayesian modeling, and statistics.