Brian K. Hurley

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EXPERIENCE

Insight Data Science — Palo Alto, California
Data Science Fellow — *January 2018 - Present*

- Developed "Beat the Crowd," a Python-based web application for predicting crowd levels on Bay Area Rapid Transit (BART)
- Used Pandas to collect and clean 6 years of hourly BART ridership data, scraped 6 years of weather history from Weather Underground using lxml, and stored data in PostgresSQL
- Visualized data using Matplotlib and Seaborn.
- Applied machine learning techniques to predict passenger volume using a linear regression algorithm with Scikit-Learn
- Deployed an interactive front end using Flask with Bootstrap

University of California Davis, Center for Mind and Brain — Davis, California
PhD Researcher — *September 2010 - January 2018*

- Created and lead multiple research projects on human auditory processing using controlled experiments, cognitive tasks, psychophysics, motion capture, and computational models.
- Developed analysis pipelines in R, MATLAB, and Python to obtain, clean, visualize, and statistically model data. Pipelines used by several laboratory researchers across projects.
- Collaborated across institutions and disciplines to leverage complimentary skills. Resulted in 1 inter-institution publication and the optimization of a popular experiment paradigm.
- Developed Attamap Experiment Manager (https://github.com/janatalab/attmap) and adaptbat (https://github.com/janatalab/adaptbat) experiment software using MAX/MSP and MATLAB. Both used a Bayesian framework to optimize estimation of listener thresholds for detecting intensity and temporal deviance in sound sequences. Both programs used by researchers at multiple institutions.

University of California Davis, Psychology Department — Davis, California
Teaching Assistant — *September 2010 – December 2017*

- Translated complex topics in human behavior, neuroscience, and research methods to new learners in understandable, compelling terms
- Delivered presentations to audiences that ranged from small groups to hundreds of students
- Assisted undergraduate students in improving writing skills

University of Texas at Dallas, School of Behavioral & Brain Science — Richardson, Texas
Research Assistant — *January 2008 - May 2010*

- Collected and analyzed behavioral data for research on human memory.
- Awarded Undergraduate Research Scholar Award grant and School of Behavioral & Brain Sciences Honors with Distinction for independent research project on memory for rhythmic patterns.
- Trained research assistants and assisted with laboratory management.

EDUCATION

University of California, Davis — Davis, California
Ph.D., Psychology (Cognitive Neuroscience) — *January 2018*
M.A., Psychology (Cognitive Neuroscience) — *December 2013*

University of Texas at Dallas — *Richardson, Texas*
B.A., Psychology, *Magna Cum Laude* — *May 2010*

SKILLS

Languages: Python, R, MATLAB, SQL
Tools: Pandas, NumPy, SciPy, Scikit-Learn, Matplotlib, Seaborn, lxml, ggplot2, dplyr, tidyr, git, svn

SIDE PROJECTS

Diablo Velo – https://github.com/bkhurley/diablo_velo

- Used Python to analyze and predict cyclists' moving times for a popular segment on Strava.com
- Obtained data from Strava API and scraped weather data from Weather Underground using Beautiful Soup
- Munged, visualized, and modeled data using Pandas, Matplotlib, Seaborn, and Scikit-Learn