

Brian K. Hurley

🏠 San Mateo, California 📞 469-231-8265 ✉ hurley.brian@gmail.com
🔗 bkhurley.github.io 🌐 bkhurley in bkhurley

EXPERIENCE

Facebook

People Research Scientist, People Analytics

Menlo Park, California

April 2018 - Present

- Developed text-mining framework in R to extract and rank themes from open-ended survey comments using a topic modeling approach. Provided scalable, automated solution for uncovering key insights.
- Collect, clean, visualize, and model many forms/sources of data to understand predictors of employee engagement and retention.
- Collaborate cross-functionally to increase business impact and actionability of analyses.
- Distill rigorous quantitative results into practical insights/recommendations for non-technical stakeholders.

Insight Data Science

Data Science Fellow

Palo Alto, California

January 2018 - April 2018

- 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 7 years of hourly BART ridership data, scraped 7 years of weather history from Weather Underground using lxml, and stored data in a PostgreSQL database.
- Identified trends and patterns in data through visualization with Matplotlib and Seaborn.
- Trained random forest regressor to predict passenger volume with Scikit-Learn. Random forest model explained 93% of the variance in test data.
- Deployed a front-end interface on Amazon Web Services using Flask with Bootstrap. Returns crowd predictions based on user input.

University of California Davis, Center for Mind and Brain

PhD Researcher

Davis, California

September 2010 - January 2018

- Led multiple research projects on human auditory processing using controlled experiments, cognitive tasks, psychophysics, motion capture, and computational models, resulting in 3 peer-review journal publications.
- Developed analysis pipelines in R, MATLAB, and Python to obtain, clean, visualize, and statistically model data. Pipelines adopted by several laboratory researchers.
- Collaborated across institutions and disciplines to leverage complimentary skills, resulting in an inter-institution publication and the optimization of a prevalent experiment paradigm.
- Developed [Attmap Experiment Manager](#) and [AdaptBAT](#) experiment software using MAX/MSP and MATLAB, respectively. Both used a Bayesian framework to estimate listeners' sensitivity for detecting events in sound patterns and were used by researchers at multiple institutions.

University of California Davis, Psychology Department

Teaching Assistant

Davis, California

September 2010 - December 2017

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

EDUCATION

University of California, Davis

Ph.D., Psychology (Cognitive Neuroscience)

Davis, California

January 2018

University of Texas at Dallas

B.A., Psychology, Magna Cum Laude

Richardson, Texas

May 2010

- Awarded *Undergraduate Research Scholar Award* grant.
- Awarded *School of Behavioral & Brain Sciences Honors with Distinction*

SKILLS

Languages: R, Python, SQL, MATLAB

Tools: *Python:* Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn; some experience: SciPy, lxml, Beautiful Soup | *R:* tidyverse, ggplot2, tidytext, lme4, topicmodels | *Version control:* git, svn

SIDE PROJECT

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 data and built ridge regression using Pandas, Matplotlib, Seaborn, and Scikit-Learn.