Brian K. Hurley

San Mateo, California 469-231-8265 hurley.brian@gmail.com
bkhurley.github.io bkhurley bkhurley

EXPERIENCE

Humu Mountainview, California
People Scientist *May 2019 - Present*

- Combining behavioral science with analytics and machine learning to make work better

Facebook Menlo Park, California
People Research Scientist, People Analytics *April 2018 – May 2019*

- Developed and scaled a topic modeling framework to extract themes from open-ended survey comments. Provided stakeholders with quick, automated uncovering of actionable insights and drastically reduced the time/resources previously required to manually read and code comments
- Designed and delivered a comprehensive set of quantitative analytics for Facebook's Internal Communications team, impacting executive-level decision-making
- Integrated internal and external data sources – including transportation data – to better understand the association between commute conditions and employee turnover
- Collaborated cross-functionally to increase business impact of analyses
- Distilled rigorous quantitative analytics into practical implications/recommendations for less technical stakeholders

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

- Developed BeatTheCrowd, a Python-based web application driven by machine learning to predict crowd levels on Bay Area Rapid Transit (BART)
- Collected and cleaned 7 years of hourly BART ridership data, scraped 7 years of weather history from Weather Underground, designed a PostgreSQL database for data storage
- Predicted passenger volume using a random forest regressor, explaining 93% of the variance in test data
- Deployed a front-end interface on Amazon Web Services using Flask with Bootstrap. UI returns crowd predictions based on user input

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

- Created and led 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 subsequently 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 prevalent experiment paradigm.
- Developed Attmap Experiment Manager and AdaptBAT experiment software programs using MAX/MSP and MATLAB, respectively. Both used a Bayesian framework to optimize estimation of listener thresholds for deviance detection in sound patterns and were 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.
- Wrote and delivered presentations to student audiences that ranged from small groups to hundreds.
- Assisted undergraduate students in improving writing and research design skills.

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

- Collected and analyzed behavioral data from 3 experiments on human memory.
- Trained 4 research assistants on data collection procedures and assisted with laboratory management.

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EDUCATION

University of California, Davis Davis, California
Ph.D., Psychology (Cognitive Neuroscience) *January 2018*

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

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

SKILLS

Languages: Python, R, MATLAB, SQL
Tools: *Python*: Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn; some experience: SciPy, lxml, Beautiful Soup | *R*: tidyverse(ggplot2, dplyr, tidyr, lme4 | *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.