

# Katharine Porter

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## Skills

- Languages: Python, SQL, Matlab *familiar with* R, HTML/CSS, shell scripting
- Tools: Scikit-Learn, Pandas, Matplotlib, Seaborn, Numpy, git, Flask, Bootstrap, MySQL, AWS
- Techniques: linear & logistic regression, support vector machine & random forest classification, recursive feature elimination, principal components analysis, k-means clustering, experimental design

## Experience

### Fellow, Insight Data Science

Boston, MA June 2016 – present

Developed predictive model for Constant Therapy to prevent user churn; demo at [www.churnnomore.me](http://www.churnnomore.me)

- Trained and validated random forest model, engineered and selected features using Pandas and MySQL (database of >10,000 users), predicting user drop-off with 83% accuracy
- Created interactive interface hosted on Amazon AWS using Flask and Bootstrap for visualization of insights
- Produced actionable recommendations for increased user retention, and method to identify at-risk users

### Graduate Researcher, Harvard University

Cambridge, MA

2011 – 2016

Designed, executed, analyzed, and communicated results of experimental research projects using both fMRI and behavioral techniques. Investigated mechanisms underlying visual object individuation and identification.

- Completed 20+ behavioral experiments with both in-lab and online subjects
- Wrote interactive front end in HTML/CSS with JavaScript for data collection in Amazon MTurk experiments
- Completed 3 fMRI experiments collecting and analyzing large, high-dimensional neuroimaging datasets (3+ billion data points per experiment)
- Wrote customized code for the creation (4D matrices) and presentation of stimuli in Matlab, including interaction with MRI scanner, with code shared within and across labs in the department
- Data management and analyses including: SVM classification, regression, recursive feature elimination
- Resulted in peer-reviewed publication (+1 in prep.), 5+ oral presentations, 3 conference posters

### Independent Researcher, University of Bologna

Bologna, Italy

2010 – 2011

Awarded \$20,000 scholarship to spearhead a project exploring the neural correlates of voice recognition in the congenitally blind

- Coded and executed event-related fMRI experiment using Matlab; managed subject recruitment
- Resulted in journal article (under review)

## Education

PhD, Cognitive Neuroscience, **Harvard University**

Cambridge, MA

2016

BA, Psychology & Art History/Studio Art, **Dartmouth College**

Hanover, NH

2010

## Awards and Honors

2014	Bok Center for Teaching Certificate of Distinction – Teaching Fellow, Cognitive Neuroscience
2013	NSF Graduate Research Fellowship Program – Honorable Mention
2010	James B. Reynolds Scholarship for Research – \$20,000