

# Matt Mollison, Ph.D.

DATA SCIENTIST

San Francisco, CA, USA

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## Summary

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Data scientist and machine learning enthusiast. Cognitive neuroscience Ph.D. rooted in experimental psychology. Enjoys learning new technologies and finding the right tool for the job, and driven to find the business case at the root of a problem. Motivated to work on projects that benefit society, including as a volunteer at hackathons and meetups.

## Skills

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<b>Programming</b>	Python, SQL, R, MATLAB, Objective-C*, C* (* prior experience)
<b>Tools &amp; Technologies</b>	Pandas, statsmodels, scikit-learn, TensorFlow, PySpark, numpy, scipy, Jupyter, git, AWS, HDFS
<b>Analysis Techniques</b>	Machine learning, time series analysis, neural networks, statistics, empirical design, visualization

## Education

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### University of Colorado Boulder

Boulder, CO

PH.D. IN COGNITIVE NEUROSCIENCE

2015

- Dissertation: Distributed practice and distributed representations: Investigating the spacing effect using EEG

### Brandeis University

Waltham, MA

B.A. IN PSYCHOLOGY

2005

- Honors Thesis: Event-related potentials in humans during spatial navigation

## Experience

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### Freelance Consultant

San Francisco, CA

DATA SCIENTIST

Mar. 2017 – Present

- Strategic planning for the analysis and processing/machine learning pipeline for a new mobile application.
- Executed the analysis of and predictive model building/assessment for time series sensor data collected with the app.

### Code for San Francisco, Data Science Working Group

San Francisco, CA

LEAD SCIENTIST

Feb. 2016 – Present

- Volunteer at a weekly meetup to work on and oversee projects that solve problems involving civic issues and open data.
- As a lead scientist, I help assure statistical and technical quality and help educate volunteers who are new to the group.

### Silicon Valley Data Science

Mountain View, CA

DATA SCIENTIST

Jan. 2015 – Mar. 2017

- Trained deep neural networks (RNN/LSTM) to implement an automatic speech recognition system.
- Developed and deployed predictive models for a major global company to help them understand customer behavior (churn, purchasing patterns, fraud).
- Applied time series models to forecast sales figures for a large company that sells energy management hardware, software, and services.
- Helped develop a data strategy report for a large technology hardware manufacturing company. This involved detailing how to adapt and expand current practices around data collection to provide analytics and data services across a number of verticals.
- Co-developed an ARIMA time series modeling tutorial, presented at PyData SF 2016.

## Insight Data Science

Palo Alto, CA

FELLOW

Sep. 2014 – Nov. 2014

- Created *This Is Happening*, a website for finding social events happening now.
- Real-time event detection by streaming social media activity into a database and comparing current activity to baseline levels. Pockets of activity were used as seed locations for a clustering algorithm to label events.
- Summarized event topics using natural language processing and API calls to retrieve nearby media (Twitter, Instagram).
- Deployed the front-end using Flask, Bootstrap, jQuery, JavaScript, HTML, CSS, and AWS.

## University of Colorado Boulder

Boulder, CO

GRADUATE RESEARCHER

2008 – 2015

- Employed statistical and machine learning techniques on neural and behavioral data to assess hypotheses about memory formation, with implications for improving studying strategies in the real world.
- Communicated findings via publications and conference talks to greater psychological community.
- Developed a software package for organizing and analyzing neural data.
- Developed a software framework for running psychology experiments.
- Course instructor for *Introduction to Cognitive Psychology*.

## University of Pennsylvania

Philadelphia, PA

LAB MANAGER AND RESEARCHER

2005 – 2008

- Programmed experiments for studying memory and spatial navigation in humans.
- Analyzed behavioral and neural data recorded during memory tasks.
- Coordinated research and lab business with collaborators (principal investigators, graduate students, and undergrads) at institutions around the US.

## Brandeis University

Waltham, MA

UNDERGRADUATE RESEARCH ASSISTANT

2002 – 2005

- Conducted an experiment investigating neural correlates of high-level perception in a spatial navigation task.
- Analyzed the above data, culminating in an honors thesis and subsequent publication.

## Honors & Awards

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April 2016    **2nd place team**, Kafka Stream Data Hackathon

San Francisco, CA

2009    **Honorable Mention**, National Science Foundation Graduate Research Fellowship

2003 – 2005    **Dean's List**, Brandeis University