

# Jonathan Withers

Data Scientist — Ethnomusicologist

Recent ethnomusicology Ph.D. with 3+ years of experience in teaching a variety of subjects. With a background in physics and music, I excel at both numbers-based analysis and at communicating complex ideas in different ways.

## EXPERIENCE

**General Assembly** 2018  
Data Scientist in Training

Applied a broad range of data science tools to solve diverse problems, including web scraping, data munging, exploratory analysis and feature engineering. Built inferential and predictive models using methods including regression, decision trees/random forests, and SVMs. **Completed machine learning projects, deployed live data science applications... this section will be expanded as the course continues.**

**Salem State University** 2016 - 2018  
Visiting Lecturer

Taught classes on world music to non-majors, introducing broad global perspectives through unfamiliar music.

**Brown University** FALL 2016  
Visiting Lecturer

Taught a topics-based course on music in the Middle East. Discussed nationalism, religious discourse, and concepts of modernity.

## EDUCATION

2010 – 2016 **Harvard University**  
Ph.D.  
Ethnomusicology

2005 – 2010 **University of Pittsburgh**  
B.S., B.Phil  
Physics, Music

## INTERESTS

Music, Language Learning, Cooking, Camping

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## RELEVANT SKILLS

PYTHON	NumPy, Pandas, Matplotlib, Seaborn, scikit-learn, StatsModels, NLTK, BeautifulSoup, LibROSA, <b>TensorFlow</b> , <b>PyMC3</b>
OTHER SOFTWARE	Tableau, SQL, R, $\LaTeX$ , Microsoft Office

## PROJECTS

### Capstone Project

**When I know what this project is going to be, I'll write a description of it here. I think it should use important keywords like Random Forests or Neural Networks. I might use words like voice recognition or artificial intelligence. Since I haven't done this yet, I can't say for sure.**

### Turkish Song Time Line

Scraped song lyrics of popular Turkish singers from a lyrics website and built a classifier to characterize them by primary emotion. Organized this data by year and drew correspondences between lyrical themes in popular music and important events in recent Turkish political and social history.

### Reddit Comment Classifier

Scraped comments from two relatively popular subreddits, BlackPeopleTwitter and WhitePeopleTwitter. Used Natural Language Processing to train a classifier to predict which subreddit a comment would come from. Uncovered language patterns that differentiate discourse in online spaces.