

# Micaela V. McCall

## DATA SCIENTIST

📍 Washington DC

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## SKILLS

### Data Science

Python (Pandas, NumPy, Scikit-learn, Matplotlib/Seaborn, & more), R (Tidyverse, various statistical packages), predictive analytics/machine learning, statistical modeling (univariate and multivariate modelling, parametric and nonparametric statistics), Git/Github, Unix/Linux, SQL

### Research

FSL (MRI and fMRI analysis), Microsoft Suite, Prism, multidisciplinary collaboration, design of written and verbal reports, clinical communication, MATLAB,

### Other

Spanish (proficient)

## EDUCATION

**Emory University**, *BS in Neuroscience and Behavioral Biology, BA in Religion*

2014-2018

- **Honors:** Highest Honors in Neuroscience Research, Phi Beta Kappa, Nu Rho Psi (National Neuroscience Honor Society), Theta Alpha Kappa (National Religious Studies Honor Society).

Atlanta, GA

## PROJECTS & PUBLICATIONS [more at michaelamccall.com](https://michaelamccall.com) 📄

### Finding Topic Clusters in Tech News [\(GitHub\)](#)

01-2020

NIH Foundation for Advances Education in the Sciences, Bioinformatics and Data Science

Bethesda, MD

- Web-scraped 1,500 tech news articles and trained a KMeans unsupervised algorithm to cluster articles based on content.

### Exploring Patient Satisfaction and Readmission in Medically Underserved Areas [\(GitHub\)](#)

09-2019

NIH Foundation for Advances Education in the Sciences, Bioinformatics and Data Science

Bethesda, MD

- Munged data from multiple API queries, totalling over 2400 rows, and visualized factor relationships using Python.

### Using Supervised Learning to Classify Drug Consumption Behavior [\(GitHub\)](#)

11-2018

NIH Foundation for Advances Education in the Sciences, Bioinformatics and Data Science

Bethesda, MD

- Trained Logistic Regression, random forest, and SVC models on survey data to predict drug use using Python.

### Pleasant Deep Pressure: Expanding the Social Touch Hypothesis

09-2018

National Center for Complementary and Integrative Health

Bethesda, MD

- Processed and statistically analyzed fMRI data using Python and FSL; created visualizations for manuscript.
- Manuscript in preparation: by Laura K. Case, Jaquette Liljencrantz, **Micaela V. McCall**, et al.

### Honors Thesis: Analyzing Non-verbal Behavior Throughout Recovery in a Sample of Depressed Patients Receiving Deep Brain Stimulation

05-2018

Atlanta, GA

Emory University

- Designed project, collected, and analyzed behavioral data in R using Factor Analysis, Analysis of Variance, and Regression.
- Manuscript in preparation: by **Micaela V. McCall**, Patricio Riva-Posse, M.D., Helen S. Mayberg, M.D., Andrea L. Crowell, M.D.

## CURRENT POSITION

### Data Scientist

03-2020

ATA, LLC, The Full Stack Data Science Company

Present

- I work on the development and integration of machine learning and statistical algorithms into Vienna, VA full stack data science solutions for our clients

## PAST EXPERIENCES

### Research Analyst

National Institutes of Health, National Center for Complementary and Integrative Health

- Built pipelines in R and Python for analysis of behavioral and physiological data (fMRI, autonomic).
- Collaborated with a diverse research team, facilitated patient visits, and consulted with patients on study procedures.
- Implemented experimental procedures (behavioral, MRI imaging) with an eye towards data quality and bias.
- Designed data visualizations, written, and verbal reports for multidisciplinary audiences.

05-2018 -  
03-2020  
Bethesda, MD

### Undergraduate Neuroscience Research Honors Candidate

Emory University School of Medicine, Dept. of Psychiatry

- Earned Highest Honors in research.
- Developed projects to collect and statistically examine physiological and quantitative behavioral data using R.
- Presented results to diverse, technical and non-technical thesis committee.

06-2017 -  
05-2018  
Atlanta, GA

### Research Assistant

Mauritian Laboratory for Experimental Anthropology

- Implemented ethnographical research methods (conducted interviews with local Mauritians, collected saliva samples during local sword-climbing rituals).
- Designed research project to explore religious syncretism.

07-2016  
La Gaulette,  
Mauritius

### Undergraduate Research Assistant

Yerkes National Primate Research Center

- Collected observational social behavior of infant Rhesus macaques.
- Examined macaque eye-tracking data to assess the effect of oxytocin dosing on social gaze preference.

08-2015 -  
05-2017  
Atlanta, GA

## PRESENTATIONS

Laura K. Case PhD, **Micaela V. McCall**, Megan Bradson, M. Catherine Bushnell PhD. Effect of Naloxone on Touch Intensity and Pleasantness. Poster presented at American Pain Society Scientific Meeting.

04-2019  
Milwaukee, WI

**Micaela McCall**, Andrea Crowell MD, Lydia Denison BS, Patricio Riva Posse MD, Helen Mayberg MD. Non-verbal Behavior in Depression Patients Receiving Deep Brain Stimulation. Poster presented at Emory University Neuroscience and Behavioral Biology Undergraduate Research Symposium.

04-2018  
Atlanta, GA

**Micaela McCall**, Andrea Crowell MD, Helen Mayberg MD. Acute and Chronic Deep Brain Stimulation Effect on Heart Rate Variability. Poster presented at Emory University Summer Undergraduate Research Symposium.

07-2017  
Atlanta, GA

**Micaela McCall**, J. M. Brooks, T. J. Jonesteller, S. Moss, T. R. Heitz, L. A. Parr, PhD. The effect of chronic oxytocin on the gaze preferences of infant macaques. Poster presented at Emory University Fall Undergraduate Research Symposium.

08-2016  
Atlanta, GA

## TRAININGS & WORKSHOPS

Machine Learning in Python at FAES Bioinformatics and Data Science, Bethesda, MD

NVIDIA GPU Technology Conference, Washington DC

Artificial Intelligence in Healthcare: From Prevention & Diagnostics to Treatments, Bethesda, MD

IBM Hands-on Introduction to Machine Learning / Deep Learning Workshop, Bethesda, MD

Maryland Neuroimaging Retreat, Baltimore, MD

Discovery and Validation of Biomarkers to Develop Non-Addictive Therapeutics for Pain, Bethesda, MD

08-12, 2019  
11-2019  
10-2019  
11-2019  
04-2019  
11-2018

## EXTRAS

### Buddhism

I am involved in the DC insight meditation community and I served as the President of the Emory Buddhist Club, hosting weekly meditations led by ordained Buddhist teachers of various traditions. I studied abroad in India, living in the Tibetan Buddhist community in exile. There, I completed a research project on resiliency in the Tibetan community in exile, including primary source research and interviews.

**Activism**

I am passionate about involvement in LGBTQ and intersectional feminist causes. I served as Conversations Chair of the Emory Feminists in Action club, designing and promoting weekly discussions on various feminist and intersectional topics, and initiating dialogues with other direct-action-focused clubs on campus.

**Mentorship**

In my current position, I mentor summer interns and college students. In college, I served as a Peer Mentor in the Emory College Undergraduate Research Partners Programs, meeting one-on-one with Freshman research “partners” and designing professional development and ethics trainings with graduate mentors.