

# BRIANNA SMITH

MACHINE LEARNING & DATA SCIENCE RESEARCHER

## CONTACT

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🌐 <https://bricha2.github.io>

## HONORS

Generation Next Scholar (2020-2022)  
Bridge to Doctorate Fellow (2018-2020)  
Marc U\*Star Scholar (2016-2018)  
Meyerhoff Scholar (2014-2018)

## ORGANIZATIONS

Alpha Epsilon Lambda Honor Society (2020)  
National Society of Black Engineers (2018)  
Black Graduate Student Organization (2018), E-board Member: Historian

## SKILLS

**Machine Learning:** Data Visualization, Data handling, Clustering & Classification, Data analytics, Web Scraping, Data Mining, Regression, Neural Networks

**Programming:** Python, R, MATLAB, Java, SQL, Jupyter Notebook, Google Colab,

**Libraries:** NumPy, SciPy, Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, Matplotlib, Seaborn, NLTK

## RELEVANT EXPERIENCE

### Humana

2023 - Present

Optimized internal **Responsible AI tooling** for bias assessment; advised data scientists on best practices for ethical compliance.

**Audited third party vendors** to ensure machine learning practices align with Responsible AI standards.

### IBM

Summer 2021 & Summer 2022

Utilized novel techniques from robust statistics to create a new methodology for adding a dimension of **explainability** to **black-box models**.

Tested novel technique on a **diverse selection of** use cases including **datasets and model types**.

### University of Florida

2018 - Current

Written several works about the use of **Machine Learning across industries**, including policing, healthcare, finances, transportation, etc. Developed an **expertise in algorithmic bias and fairness** mitigation technologies.

Utilized **NLP** to build a **conversational AI agent** for shopping & built an Android mobile app as a multi-modal interface.

Studied the needs of ML practitioners, computer science students, and the general populace to understand **user needs** and apply them to different ML technologies.

### Spotify

Summer 2020

Collaborated across the company as an algorithmic bias **consultant**, assisting teams with fairness concerns in their **differing applications of machine learning** & Exposed several teams and employees to new and emerging fairness AI technologies and methods for addressing algorithmic bias.

Conducted a user study measuring the usability and propensity for insight of fairness AI technologies in the workplace & Utilized findings to conduct a complete fairness assessment on a new company-wide machine learning effort.

## EDUCATION

### University of Florida

2018 – 2023

Ph.D., Computer Science (2023)

M.S., Computer Science (2020)

### University of Maryland, Baltimore County

2014 – 2018

B.S., Computer Science

B.S., Bioinformatics

GPA: 3.6

## PROCEEDINGS & PAPERS

- Richardson, B., Sattigeri, P., Wei, D., Ramamurthy, K.N., Varshney, K., Dhurandhar, A., Gilbert, J.E. (2023). Add-Remove-or-Relabel: Practitioner-Friendly Bias Mitigation via Influential Fairness. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23)*, June 12–15, 2023, Chicago, IL, USA. ACM, New York, NY, USA, 17 pages.
- Richardson, B., Garcia-Gathright, J., Way, S. F., Thom, J., Cramer, H. 2021. Towards Fairness in Practice: A Practitioner-Oriented Rubric for Evaluating Fair ML Toolkits. In *CHI Conference on Human Factors in Computing Systems (CHI '21)*, May 8–13, 2021, Yokohama, Japan. ACM, New York, NY, USA 13 Pages.
- B. Richardson, D. Prioleau, K. Alikhademi and J. E. Gilbert, "Public Accountability: Understanding Sentiments towards Artificial Intelligence across Dispositional Identities," *2020 IEEE International Symposium on Technology and Society (ISTAS)*, 2020, pp. 489-496, doi: 10.1109/ISTAS50296.2020.9462184.
- Roberts A.L., Richardson B., Alikhademi K., Drobina E., & Gilbert J.E. (2021) General Perspectives Toward the Impact of AI on Race and Society. In: *Pearson Jr. W., Reddy V. (eds) Social Justice and Education in the 21st Century. Diversity and Inclusion Research*. Springer, Cham.
- Prioleau, D., Richardson, B., Drobina, E., Martin, J., Williams, R., Gilbert, J. E. 2021. How Students in Computing-Related Majors Distinguish Social Implications of Technology. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*. ACM, New York, NY, USA, 1013–1019.
- Alikhademi, K., Drobina, E., Prioleau, D., Richardson, B., Purves, D., Gilbert, J.E. 2021. A review of predictive policing from the perspective of fairness. *Artif Intell Law* (2021).
- Alikhademi, K., Richardson, B., Ross, K., Sung, J., Gilbert, J., Kwon, W.S., Chattaraman, V. (2019). AI-Based Technical Approach for Designing Mobile Decision Aids. In: Stephanidis C. (eds) *HCI International 2019 - Posters. HCII 2019. Communications in Computer and Information Science*, vol 1033, pp. 163–169.
- Alikhademi, K., Richardson, B., Martins, J., Chattaraman, V., Kwon, W.S., Gilbert, J. (2019). Systematic Evaluation of a Conversational Voice User Interface for Decision-making. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 63, pp 413-416. 10.1177/1071181319631200.

## PRESENTATIONS

- Richardson, B., Alikhademi, K., Drobina, E. (2022). Keeping Humans in the Loop Towards Responsible ML. Presentation given at *ACM's 2022 Richard Tapia Celebration of Diversity in Computing Conference*.
- Richardson, B and Varshney, K. (2021). Addressing The Design Needs Of Implementing Fairness In AI Via Influence Functions. Invited Talk at the *2021 INFORMS Annual Meeting*, virtual.
- Prioleau, D and Richardson, B. (2020). Technological Needs of the Black Collective. Presentation given at *ACM's 2020 Richard Tapia Celebration of Diversity in Computing Conference*, virtual.
- Sherman, I., Smarr, S., Smith, T., Richardson, B., Gilbert, J. (2018). Exploring Culturally Responsive Game Development. Abstract presented at the annual meeting of the *International Conference on Urban Education*, Nassau, Bahamas.
- Alikhademi, K., Mack, N., Ross, K., Richardson, B., Chattaraman, V., Kwon, W.S., Gilbert, J. (2018). Implementing MODA: A Multi-Strategy, Mobile, Conversational Consumer Decision-Aid System. Paper presented at the annual meeting of the *ACM Conference on Computer-Supported Cooperative Work and Social Computing*, Jersey City, New Jersey.