

**BRIANNA K. RICHARDSON**  
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## EDUCATION

### University of Florida

M.S., Computer Science  
Ph.D., Computer Science, **GPA: 3.7**  
Focus Area: Machine Learning

**Gainesville, FL**

Dec 2020  
May 2023

### University of Maryland Baltimore County (UMBC)

B.S., Bioinformatics & Computer Science, **GPA: 3.6**

**Baltimore, MD**

May 2018

## HONORS/AWARDS

**Generation Next Scholar**

**Bridge to Doctorate Fellow**

**Marc U\*Star Scholar**

**Meyerhoff Scholar**

**Spring 2020 – Spring 2022**

**Fall 2018 – Spring 2020**

**Fall 2016 – Spring 2018**

**Fall 2014 – Spring 2018**

## SKILLS

**Machine Learning/Data Science:** Data Visualization, Predictive Analysis, Clustering & Classification, Data analytics, Web Scraping, Data Mining, Linear/Logistic Regression, Neural Networks, Deep Learning, Graph Theory, Hyperparameter optimization

**Programming:** Python, R, MATLAB, C/C++, Java, NodeJS, SQL

**Applications:** GitHub, Bitbucket, Android Studio, MongoDB, Jupyter

**Scripting:** JavaScript, PHP, HTML, Bootstrap Frameworks

## RELEVANT EXPERIENCE

### IBM

**May 2021 – August 2021**

#### Trustworthy AI (Research Intern)

Advisors: Kush Varshney

- Utilized groundbreaking robust statistics techniques to build novel explainability tools for ensuring fairness in machine learning models
- Adopted strategies from pattern mining and Rule Generation to create digestible depictions of overloading datasets
- Studied the use of this novel tool in practice and employed findings from participatory design research to improve user experience

### Spotify

**June 2020 – August 2020**

#### Machine Learning & Algorithmic Bias (Research Intern)

Advisors: Jean Garcia-Gathright, Henriette Cramer, Samuel Way

- 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

### University of Florida

**June 2018 – Present**

#### Computer and Information Science & Engineering Department (Research Assistant)

Advisor: Dr. Juan Gilbert

- **Sentiment & Trust in AI:** Collect sentiment on recent advances in Artificial Intelligence (AI) to determine if perspectives of AI and the social impact of AI differ across socio-economic, racial, gender, and/or geographical lines
- **Explainability in AI:** Test the impact user domain knowledge has on AI explainability by measuring the trust individuals have with a simulated machine learning tool that generates mostly incorrect responses with explanations
- **MoDA:** Assist with the creation, implementation, and testing of an in-store Android mobile shopping assistant that advises the user to the products that most meets their requests
- **Fairness in Explainability:** Evaluate Explainable & Interpretable AI's ability to measure metrics of fairness in ML classifiers; test how effective such tools are at identifying fairness with known bias classifiers

## ORGANIZATIONS

**Alpha Epsilon Lambda Honor Society**

**National Society of Black Engineers**

**Black Graduate Student Organization**, E-board Member: Historian

**Spring 2020 – Current**

**Fall 2018 – Current**

**Fall 2018 – Current**

## PROCEEDINGS & PAPERS

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

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.