Teanna Barrett

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My research is an interrogation of the design, deployment and evaluation of Machine Learning as a means to understand contemporary anti-blackness and inform liberatory technology.

Education:

Howard University | Washington, D.C. | GPA: 3.97   (Aug 2019 - May 2023)
- Summa Cume Laude, Bachelor of Science in Computer Science with a minor in Philosophy
- **Relevant Coursework**: Probability and Statistics I, Intro to ML, Applied Data Science, Affective Computing, Database Systems (SQL), Computer Science III (Data Structures & Algorithms)
- **Activities**: Intro to CS Teacher's Assistant (Fall 2020), Howard University Community Gospel Choir (2020-2023), Tapia Conference Student Volunteer (Sept 2022), AAAI Undergraduate Consortium (Feb 2023), FAccT Volunteer (June 2023)

Publications:

Barrett, T., Chen, Q., & Zhang, A. (2023, June). **Skin Deep: Investigating Subjectivity in Skin Tone Annotations for Computer Vision Benchmark Datasets**. In Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (pp. 1757-1771).

Corriette, B., Parsons, D., Alim, C., Barrett, T., Cranston, T., & Washington, G. (2023, March). **Using VR to Elicit Empathy in Current and Future Psychiatrists for their Patients of Color**. In 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW) (pp. 187-190). IEEE.

Aryal, S. K., Barrett, T., & Washington, G. (2022, October). **Evaluating Novel Mask-RCNN Architectures for Ear Mask Segmentation**. In Proceedings of the 2022 11th International Conference on Bioinformatics and Biomedical Science (pp. 46-53).

Aryal, S., Barrett, T.,& Aryal, S. (2022) **Ear Detection and Recognition Survey**. Manuscript in preparation.

Research and Work Experience:

Undergraduate Research Assistant for Affective Biometrics Lab   (Jan 2020-Present)
- Presented project updates to advisor, graduate researchers and peers
- Participated in troubleshooting meetings for Virtual Machine maintenance
- Built life-like avatar in Unity using blender and Unity Multipurpose Avatar assets
- Writing literature review of VR applications for DEI trainings

Diverse Ear Biometric Dataset   (Mar 2020-Mar 2022)
- Wrote survey paper on Ear Recognition methodologies
- Collected and mask-labeled over 300 images for CV dataset
- Led undergraduate research team in building ear image dataset
- Utilized Google Colab and Pixel Annotation tool to collect and store 1000+ images

Google STEP Intern | Cambridge, MA & Mountain View, CA   (May 2020-Aug 2021)
- Implemented REGEX address extraction algorithm in Android to populate a form in Kotlin

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- Scaled a map-marking algorithm using JavaScript, Java, Google Maps and Datastore APIs (with JUnit testing)

NYU Center for Data Science Undergraduate Research Program   (Jan 2021- July 2021)
- Utilized Twitter API and Jupyter Notebooks to analyze the frequency of BLM-related tweets during June 2020 with histograms
- Annotated over 200 tweets for Twitter data research
- Participated in 3-day Data Science Bootcamp, conducted several knowledge-building interviews, and completed NYU Research Ethics course

Technology and Power Network   (June 2021-Present)
- Programmed subsequent 2-session workshop called "Application Denied" about building technology for recording registers that track algorithmic harms
- Facilitated third part of workshop at FAccT '22
- Records meeting minutes and creates workshop materials in weekly meetings

ACSC Data Science Program   (May 2022)
- Completed month-long self-guided training in Data Science
- Collected and cleaned DC data to generate several data visualizations
- Presented a final project on the social impact of CCTV police cameras in D.C.

DUB REU at the University of Washington   (June 2022 - Aug 2022)
- Presented poster, "Skin Deep: Uncertainty in Skin Tone Annotations for Computer Vision Fairness Benchmarks"
- Conducted literature review of skin tone annotation procedures in CV for over 70 papers
- Developed and piloted annotation system for Mechanical Turk

PRIME AIM AHEAD Program   (Sept 2022 - May 2023)
- Registered All of US Workbench Researcher for Electronic Health Record (EHR) data
- Completed self-guided trainings on health equity and Machine Learning as an inaugural member of the NIH funded program

Relevant Skills and Experiences:

Java, Kotlin (**Android Development**) HTML, CSS, JavaScript, (**Web Development**) Python, R, SQL, Jupyter Notebook, MATLAB (**Data Science**) C++, Git, REGEX. MIPS/Assembly

Honors and Achievements:

Karsh STEM Scholar Scholarship recipient for underrepresented students pursuing STEM Ph.D.
Columbia DivHacks Pinterest Anti-Racism Award for Wifi Donation App (Oct 2020)
Howard University EECS AT&T Hackathon First Place Award (Sept 2019)
Industry-Research Inclusion in STEM Education First-year research development (2019)

Professional Memberships:

Tau Beta Pi at Howard University Recording Secretary (May 21 - May 22)

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Howard University Society of Women Engineers Secretary (21-22),President (22-23)