De'Aira Gladys Bryant

Technology Square Research Building
Georgia Institute of Technology
Atlanta, GA

***e*:** dbryant@gatech.edu
***w*:** www.deairabryant.com
in: www.linkedin.com/in/deairabryant

Research Interests

De'Aira's research interests include **developing affective intelligent systems** designed for realistic healthcare scenarios. In particular, she is interested in applying artificial intelligence and machine learning techniques to foster **anthropomorphic interactions between embodied robotic agents and children** during rehabilitative tasks.

Education

Georgia Institute of Technology **Atlanta, GA**
School of Interactive Computing
Computer Science PhD Program, Focus: Intelligent Systems
August 2017 - Current

University of South Carolina (UofSC) **Columbia, SC**
Bachelor of Science in Computer Science with a minor in Mathematics
Summa Cum Laude, Graduation with Leadership Distinction in Research
August 2013 – May 2017

Experience

Human-Automation Systems (HumAnS) Lab **August 2017 - Present**
Graduate Researcher *Atlanta, GA*
Projects*: Robot Assisted Rehabilitation Therapy for Children with Motor Disabilities, Emotion Recognition Amongst Children*

- Conduct HRI user studies with children and adult participants targeting research questions related to engagement, trust and bias
- Investigate techniques that allow robots to be used in a variety of domains to assist children effectively
- Manage multiple undergraduate students working on research related projects
- Collaborate with professionals from various disciplines such as healthcare and psychology

Stem Truck South Carolina **May 2018 – August 2018**
Consulting Technical Associate *Remote*

- Created lesson plans and supplemental educational materials for primary, elementary and middle school students
- Developed and maintained organizational website and graphical content

Adobe Systems, Inc. **May 2017 – August 2017**
GEM Experience Research Design Intern *San Francisco, CA*

- Investigated research questions targeting youth perceptions of design and creativity through gamification
- Conducted ethnographic research studies with children in a commercial company research setting
- Gave presentations to Design, Technical, and Product teams on research findings

UofSC College of Engineering & Computing **August 2016 – May 2017**
Algorithmic Design (I & II) Lab Teaching Assistant (TA) *Columbia, SC*

- Prepared and attended four sessions of lab for CSCE 145 and CSCE 146 each week
- Assisted students with assignments by responding to questions and guiding thought processes
- Answered emails from students regarding lab and homework assignments

UofSC Magellan Scholars Program **August 2014 – May 2017**
Grant Recipient & Primary Investigator *Columbia, SC*
Project*: Engaging Minorities in Computer Science via Online Game & Robot Hip-Hop Dance*

- Proposed a written research proposal, budget, and timeline for project
- Developed an online gamified learning experience for students in rural SC without access to formal Computer Science classes
- Completed user-testing for developed game and published early, promising results

Assistive Robotics and Technology Lab **August 2014 – May 2017**
Undergraduate Research Assistant *Columbia, SC*
Projects*: Ms. An: The Robot Tutor, Robot Assisted Music Therapy, Spatial Contiguity*

- Conducted data collection & analysis in multiple studies by preparing study protocols, consenting documents, and questionnaires
- Prepared literature reviews on related material for technical reports
- Programed Aldebaran NAO robot for research studies and outreach activities

CRA-DREU: Georgia Institute of Technology, HumAnS Lab **May 2016 – August 2016**
Undergraduate Researcher *Atlanta, GA*
Project: *The Infant Smart Anklet for Infants At-Risk of Developing Cerebral Palsy*

- Developed a prototype anklet consisting of sensors and a mobile application
- Prepared a technical paper and presented a formal presentation on the summer work
- Conducted testing of app prototype using NAO robot conducting infant kicking simulation

Clemson University Emerging Scholars **June 2015 – August 2015**
Program Advisor *Clemson, SC*

- Assisted with daily classroom and homework assignments
- Planned student activities throughout course of summer to improve college readiness
- Recorded & edited student videos to create summer video for entire cohort

Professional Development

Publications:

Bryant, D., Xu, J., Chen, Y. P., & Howard, A. (2019). The Effect of Robot vs. Human Corrective Feedback on Children's Intrinsic Motivation. In *Proceedings of the Companion of the 2019 ACM/IEEE International Conference on Human-Robot Interaction* [In Press].

Bryant, D. and Howard, A. (2019). A Comparative Analysis of Emotion-Detecting AI Systems with Respect to Algorithm Performance and Dataset Diversity. In *AAAI/ACM Conference on AI, Ethics, and Society (AIES'19)*, January 27–28, 2019, Honolulu, HI, USA. ACM, New York, NY, USA, 6 pages. https://doi.org/10.1145/3306618.3314284

Xu, J., **Bryant, D.**, & Howard, A. (2018). Would You Trust a Robot Therapist? Validating the Equivalency of Trust in Human-Robot Healthcare Scenarios. In *The 27th IEEE International Symposium On Robot And Human Interactive Communication (Ro-Man)*.

Ogunyale, T., **Bryant, D.**, & Howard, A. (2018). Does Removing Stereotype Priming Remove Bias? A Pilot Human-Robot Interaction Study. *In Proceedings of the 2018 International Workshop on Fairness, Accountability, and Transparency in Machine Learning (FAT-ML)*.

Xu, J., **Bryant, D.**, Chen, Y. P., & Howard, A. (2018). Robot therapist versus human therapist: Evaluating the effect of corrective feedback on human motor performance. In *Proceedings of the 2018 IEEE International Symposium on Medical Robotics (ISMR)*. pp. 1-6.

Bryant, D., Boyd, J., Harris, J., Smith, M., Garcia-Vergara, S., Chen, Y., & Howard, A. (2017). An Infant Smart-Mobile System to Encourage Kicking Movements in Infants At-Risk of Cerebral Palsy. In *Proceedings of the 2017 IEEE International Workshop on Advanced Robotics and its Social Impacts (ARSO)*. pp. 1-5.

Bryant, D., Liles, K. R., & Beer, J. M. (2017). Developing a Robot Hip-Hop Dance Game to Engage Rural Minorities in Computer Science. In *Proceedings of the Companion of the 2017 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 89-90).

Liles, K. R., **Bryant, D.**, & Beer, J. M. (2017). How Can Social Robots Motivate Students to Practice Math? In *Proceedings of the Companion of the 2017 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 353-354). ACM.

Presentations:

2019 CRA URMD Grad Cohort – Kona, Hawaii	Toward Emotional Intelligence in Social Robots for Children
2019 Human Robot Interaction Conference – Daegu, South Korea	Robot vs. Human Corrective Feedback on Children's Intrinsic Motivation
2019 AAAI/ACM Conference on AI, Ethics, and Society – Honolulu, HI	A Comparative Analysis of Emotion-Detecting AI Systems
2018 TEDx Georgia Tech Student Speaker Salon – Atlanta, GA	Paying it Forward with Social Robots
2018 International Symposium On Robot And Human Interactive Communication – Nanjing, China	Would You Trust a Robot Therapist?
2018 GEM Consortium Annual Board & Conference – Los Angeles, CA	Stereotype Priming in HRI studies
2018 Robotics, Science and Systems Women in Robotics Workshop – Pittsburgh, PA	Robotic Corrective Feedback on Motor Performance
2018 International Workshop on Fairness, Accountability, and Transparency – Stockholm, Sweden	Does Removing Priming Remove Bias?
2018 International Symposium on Medical Robotics – Atlanta, GA	Robot Therapist Versus Human Therapist
2018 National Society of Blacks in Computing – New Orleans, LA	Finding & Funding Graduate School
2017 GEM Consortium Annual Board & Conference – New York, NY	Creative Gaming with Ulterior Motives: Adobe Summer Review
2017 University of South Carolina Discovery Day – Columbia, SC	Engaging Minorities in CS via Online Game & Robot Hip-Hop Dance
2017 Human Robot Interaction Conference – Vienna, Austria	Developing a Robot Hip-Hop Programming Game
2016 Grace Hopper Celebration of Women in Computing – Houston, TX	The Infant Smart Anklet for Infants At-Risk of Cerebral Palsy
2015 I.C.R.A. Robot Guru Workshop – Seattle, WA	Robot Assisted Music Therapy

Conferences/Workshops (Awarded Travel Grants):

2019 Aspen Institute Roundtable on Artificial Intelligence	Santa Barbara, CA
2019 AAAI/ACM AIES Conference Student Program	Honolulu, HI
2019 CRA Underrepresented Minorities & Persons with Disabilities CRA Grad Cohort	Kona, HI
2018 TAPIA Celebration of Minorities in Computing	Orlando, FL
2018 CHI-Me Mentoring Workshop	Montreal, Canada
2018 Robotics, Science and Systems Women in Robotics Workshop	Pittsburgh, PA
2018 National Society of Blacks in Computing	New Orleans, LA
2018 CRA Underrepresented Minorities & Persons with Disabilities Grad Cohort	San Diego, CA
2018 CRA-W Grad Cohort for Women	San Francisco, CA

2017 Inaugural Black Women in Computing Conference	Washington, DC
2016 National Society of Blacks in Computing	Atlanta, GA
2016 Grace Hopper Celebration of Women in Computing	Houston, TX
2015 IEEE International Conference on Robotics & Automation: Becoming a Robot Guru	Seattle, WA

Service:

2019 International Conference on Human Robot Interaction (HRI)	Reviewer
2018 International Conference on Social Robotics (ICSR)	Reviewer
2018 Georgia Tech Summer Undergraduate Research Experience (SURE) Program	Graduate Student Mentor
2018 IEEE Robotics and Automation Magazine Submission	Reviewer
2018 Black Girls Code: Atlanta Robot Expo	Technical Volunteer
2017 UofSC Engineering Week	Student Volunteer
2015 International Conference on Robotics & Automation (ICRA)	Student Volunteer

Achievements

Aspen Institute Roundtable on Artificial Intelligence 2019 Guest Scholar	January 2019
TEDx Georgia Tech Speaker: https://www.youtube.com/watch?v=oS3YjCUqcPU	November 2018
National Science Foundation GRFP Recipient	March 2017
National GEM Consortium Fellowship Recipient	March 2017
Graduation with Leadership Distinction in Research	May 2017
Who's Who Among American Colleges & Universities	May 2017
Lillie J. James Computer Science Award	October 2016
University of South Carolina Magellan Scholar	March 2016
UofSC Valedictorian Scholar	August 2013
South Carolina Palmetto Fellows Scholar	August 2013

Activities

Black Graduate Student Association (BGSA)	2017 - Present
Community Outreach (Various: Robotics & CS Demonstrations, SC & GA)	2017 - Present
Minorities in Computing at UofSC (Co-Founder & President)	2017 – 2018
Phi Beta Kappa National Honor Society	2016 - 2017
Alpha Kappa Alpha Sorority, Inc. (Initiated - Theta Gamma chapter: Ivy Leaf Reporter, Community Impact Days chair)	2016 – Present
Pi Mu Epsilon Mathematics Honor Society	2015 – 2017
FIRST Robotics Certified Robot Design Judge	2015 – Present

Technical Skills

Fluent Programming Languages:
Python, Java, C++, C#, HTML/CSS, JavaScript

Proficient Applications & Frameworks:
Adobe Creative Cloud, Microsoft Office Suite, App Dev: Android Studio, XCode, Choregraphe (NAO & Pepper Robots)