

# HALEY GREEN

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151 Engineer's Way, Charlottesville, Virginia 22903, USA

## EDUCATION

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### University of Virginia

*Ph.D. in Computer Engineering*

Charlottesville, Virginia

*August 2020 - Present*

- Advisor: Prof. Tariq Iqbal
- Dissertation Topic: Real-time trust evaluation in human-robot interactions.

### Brown University

*B.S. in Mechanical Engineering*

Providence, Rhode Island

*September 2016 - May 2020*

- Member of Brown University Women's Basketball Team

## AWARDS AND SCHOLARSHIPS

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- UVA Engineering Distinguished Fellowship *August 2020 - August 2021*
- National Science Foundation Research Traineeship (NRT) *August 2021 - August 2022*

## RESEARCH AND WORK EXPERIENCE

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### Graduate Research Assistant

*Collaborative Robotics Lab*

Charlottesville, Virginia

*August 2020 - Present*

- Conducting research on trust calibration in human-robot teams
- Examining mitigation strategies for task failure in a human-robot interaction
- Showcasing projects and robots to the UVA and Charlottesville communities

### Graduate Student Member

*Link Lab*

Charlottesville, Virginia

*August 2020 - Present*

- Receiving hands-on, testbed-driven cyber-physical systems experience
- Attending various recruitment and professional development events
- Engaging with student researchers in the multidisciplinary, cyber-physical systems research center

### Undergraduate Teaching Assistant

*Course: Advanced Fluid Mechanics*

Providence, Rhode Island

*January 2020 - May 2020*

- Mentored a group on designing a self-propelled helical robot swimmer
- Organized weekly meetings to keep the project on track
- Served as a liaison between research group and faculty

### Integer Holdings

*Mechanical Engineering Intern*

Salem, Virginia

*June 2019 - August 2019*

- Created SolidWorks CAD (computer-aided design) drawings and utilized 3D printer
- Collected and analyzed data for a variety of process improvement tests
- Collaborated with a small team on revitalizing safety standards for handling hydrofluoric acid

### Klöckner Pentaplast

*Mechanical Engineering Intern*

Rural Retreat, Virginia

*May 2018 - August 2018*

- Generated AutoCAD designs for parts to improve manufacturing process
- Implemented a filtration system for the Optical Controls Systems (OCS) cameras
- Experimented with various sensors on measuring roller gap to improve film thickness consistency

## PUBLICATIONS

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- [1] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “Who’s Laughing NAO? Examining Perceptions of Failure in a Humorous Robot Partner,” *ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, 2022.
- [2] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “iSpy a Humorous Robot: Evaluating the Perceptions of Humor Types in a Robot Partner,” *AAAI Spring Symposium on Putting AI in the Critical Loop: Assured Trust and Autonomy in Human-Machine Teams Symposium*, 2022.
- [3] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “Perceiving a Humorous Robot as a Social Partner,” *Elsevier*, 2022. *Under Review*.
- [4] M. M. Islam, R. M. Mirzaiee, A. Gladstone, **H. N. Green**, and T. Iqbal, “CAESAR: An Embodied Simulator for Generating Multimodal Referring Expression Datasets,” *Conference on Neural Information Processing Systems (NeurIPS), Track on Datasets and Benchmarks*, 2022. *Under Review*.

## GRADUATE COURSES

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- Advanced Digital Design Laboratory: ASIC/FPGA
- Computer Engineering Perspectives
- Computer Architecture
- Communication, Test-Beds, and Policy
- Formal Methods, Safety, and Security
- Human Error in Complex Systems
- Robotic Autonomy
- Robots and Humans
- Signal Processing, Machine Learning, and Control

## SELECTED PROJECTS

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### **Autonomous Ball Tracker**

*Course: Robotic Autonomy*

Charlottesville, Virginia

*January 2022 - May 2022*

- Programmed a robot autonomously track a moving target.
- Used Recursive Bayesian Estimation (RBE) to predict the motion of the target under occlusion.

### **Guess Who?**

*Course: Robots and Humans*

Charlottesville, Virginia

*January 2021 - May 2021*

- Created a playable game of Guess Who? between Nao and a human player.
- Explored the relationship between player enjoyment and relative game proficiency

### **An Optimal Real-Time Interaction Model of Robotic Pet**

*Course: Formal Methods, Safety, and Security*

Charlottesville, Virginia

*January 2021 - May 2021*

- Designed a set of safety, security, improvement, and system requirements.
- Implemented a set of realistic and elevated behaviors.

### **Timeloop/Accelergy for Evaluating DNN Hardware Acceleration**

*Course: Computer Architecture*

Charlottesville, Virginia

*August 2020 - November 2020*

- Used the tools Timeloop and Accelergy to analyze DNN accelerators for different deep learning tasks.
- Replicated the results of MIT's Timeloop/Accelergy workshop.

## LEADERSHIP

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|---|--------------------------------|
| · President of the Link Lab Student Committee               | <i>May 2022 - Present</i>      |
| · Member of the Link Lab Professional Development Committee | <i>November 2021 - Present</i> |
| · Member of the Link Lab Student Committee                  | <i>August 2021 - Present</i>   |
| · Captain of the Brown University Women's Basketball Team   | <i>March 2019 - May 2020</i>   |

## SKILLS

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### Robotics:

- Choregraphe
- ROS

### Computer Skills:

- Programming Languages: C, C++, Python, Java
- Statistical Analysis: IBM SPSS
- Other: Matlab, LaTeX, UNIX/Linux, Amazon Mechanical Turk

### Computer-Aided Design:

- SolidWorks
- AutoCAD
- Quartus II
- ModelSim
- Photoshop
- Illustrator

## PROFESSIONAL SERVICES

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**Organizer:** RSS 2022 Workshop in Close Proximity Human-Robot Collaboration

**Presenter:** AAAI 2022 Spring Symposium, HRI 2022, Link Lab 2022 Spring Flash Talk, Link Lab Year-Opening Poster Session, CURE Symposium

**Reviewer:** AI-HRI, IEEE RA-L, EngineerGirl, VSSEF

**Tutor:** Calculus, Programming, Accelerated Master's Program Weekend Course

**Mentor:** University of Virginia, Brown University

**Outreach:** Hollymead Elementary School, UVA SEAS Open House, UVA SWE Open House