

EDUCATION

- **Boston University** May 2022
 • **Bachelor of Arts in Computer Science: GPA 3.54** *Boston, MA*
- **Wheaton College** Sep 2018 - May 2019
 • **Bachelor of Arts in Computer Science: GPA 3.7** *Boston, MA*

RESEARCH EXPERIENCE

During my undergraduate career I accumulated significant experience in computer vision research. My journey began with simple experiments and evolved to pivotal roles overseeing project design, paper writing, and presenting the research findings to different audiences. I have worked in teams as well as independently running projects from start to finish. Below I mention the three research experiences I believe are most relevant for the current application. A full chronological account of my research experiences is on my personal website .

- **Research Intern: Computer Vision** June 2022 - Current
 • **Microsoft Research** *Redmond, WA*
 - **Principal Investigators:** Vibhav Vineet, Neel Joshi
 - **Research Topic:** Robustness of Neural Radiance Fields (NeRFs)
 - **Summary:** In this project I perform multiple experiments on a preexisting NeRF model to establish a range of intrinsic and extrinsic camera parameters and data constraints required to train a NeRF model.
- **Research Assistant** Sep 2021 - May 2022
 • **Bargal Lab, Boston University** *Boston, MA*
 - **Principal Investigator:** Sarah Bargal
 - **Research Topic:** Robustness of Generative Adversarial Networks (GANs)
 - **Summary:** In this project I curated an image dataset of Black celebrities designed to augment the CelebA dataset. I used both of these datasets to train a preexisting style- transfer GAN and perform multiple experiments to evaluate the robustness of the new GAN in generating faces of darker skinned people. I am in the process of writing a paper based on the research findings.
- **Research Assistant** Jun 2020 – Aug 2020
 • **Economo Lab, Boston University (UROP)** *Boston, MA*
 - **Principal Investigator:** Mike Economo
 - **Research Topic:** Animal Behavior Analysis from Video Data
 - **Summary:** In this project I used pose estimation models to analyze the behavior of a lab rat as it performed different tasks. I took the pose data and created a forecasting model that could predict the future position of the rat. This information is useful for behavior analysis in Neuroscience.

SELF-DIRECTED PROJECTS

I am passionate about exploring the applications of computer vision and robotics. All of these projects were developed in my basement during the pandemic lockdown. Below I describe 3 of the most relevant projects for this application, but my personal website has all of my projects.

- **Computer Vision Controlled Robotic Arm** Aug 2020 – Aug 2021
 • [project link](#) *Boston, MA*
 - **The goal** of this project was to build and program a robotic arm that could mimic the gestures of a human arm in a video in real time. In order to achieve this goal I used python to program the computer vision application on the Raspberry Pi and I used C programming to program an Arduino for prototyping the robotics. **The result** was a robotic arm that could mimic arm gestures with a slight lag due to hardware constraints.
- **Computer Vision Controlled Self-driving Toy Car** Jun 2020 – Aug 2020
 • [project link](#) *Boston, MA*

- The **goal** of this project was to build and program a robotic toy car that could move on the ground and respond to certain obstacles in its path. In order to achieve this goal I used python to program the computer vision application on the Raspberry Pi and I used C programming to program an Arduino for the robotics. **The result** was a car that could maneuver a simple obstacle course on the ground. The project was adopted by the Data Science in Action summer program at Harvard University.

Aug 2020

Boston, MA

• Hairstyle Detector

• project link

- The **goal** of this project was to create an iPhone application that could classify hairstyles in images from my gallery. In order to achieve this goal I collected and annotated a dataset of different hairstyles common to Black women and trained an image classification model. **The result** was a simple app that I built using Swift that utilized the hair classification model to label hairstyles in images in my phone's gallery.

TEACHING EXPERIENCE

- Course Assistant: Computer Systems, Boston University (Fall 2020)
- Course Grader: Artificial Intelligence, Boston University (Fall 2021)
- Program Coordinator: AI4ALL (Spring 2021)
- Teaching Assistant: Data Science in Action Summer Program, Harvard (Summer 2020,2021)

HONORS AND AWARDS

- Boston University Scarlet Key Honor Society (Fall 2021)
- Boston University Dean's List (Spring 2021, Spring 2022)
- Undergraduate Research Opportunities (UROP) Grant (Summer 2020)
- Featured Researcher UROP (Summer 2020)

GUEST TALKS

- **Summer 2021** Guest Lecture: Boston University Deep Learning Course (CS 523)
- **Spring 2021** Computer Vision Workshop: Code For Africa
- **Spring 2021** Arduino Day: Featured Community Member
- **Summer 2020** Undergraduate Research Opportunities Program Symposium
- **Summer 2020** Nairobi Women in Machine Learning and Data Science

PROFESSIONAL AND OUTREACH ACTIVITIES

- Lead Ambassador and Co-Founder, Stem Archive(Fall 2020)
- Events Coordinator, Boston African Students Association (2020-2021)