

# Nicole Villavicencio-Garduño

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## EDUCATION

### Carnegie Mellon University

Pittsburgh, PA

*Master's in Information Security, focus in Artificial Intelligence Engineering*

August 2024 - December 2025

- **Awards/Honors:** Part of first cohort of Rales Fellows, a program providing assistance to minority STEM leaders.

### Birmingham-Southern College

Birmingham, AL

*Bachelor of Honors in Computer Science, concentration in Software Engineering*

August 2021 - May 2024

- **Awards/Honors:** Diversity & Inclusion Award (2023), Steven C. Andres Applied Computer Science Award (2023), Grace Hopper Celebration Student Scholarship Recipient (2022).
- **Leadership/Activities:** Bonner Leadership Program, Harrison Honors Program, BSC computer science department tutor, and served as president for four main campus organizations.

## RELEVANT WORK EXPERIENCE

### Blue Cross and Blue Shield of Alabama

Birmingham, AL

*Technology Support Intern*

May 2024 - July 2024

- Rotated through a variety of IT teams to develop understanding within the mainframe, support center, contact center, Citrix, workstation, procurement, and asset management.
- Experienced project workflow amongst each branch of IT as they collaborated on projects within the company.

### Southern Research

Birmingham, AL

*Cybersecurity Analyst Intern*

Sept. 2023 - May 2024

- Performed asset security and inventory control of the company's devices by tracking and updating devices in the database. Also extracted hard drives from devices to ensure data security.
- Conducted Windows 10/11 imaging and configuration of computers to ensure smooth on-hire processes.
- Prepared the company's disaster recovery plans for presentation and IT management approval.

## PROJECTS

### Machine Learning to Detect Benign & Malicious Files

Birmingham, AL

*Independent Project*

Spring 2024

- Created a Python program to web scrape multiple websites and gather benign & malicious files.
- Trained a machine learning model using a neural network which differentiated benign and malicious PDF files.
- Program inputted user's files to run through and test against the model to ensure user's digital safety, releasing a 93% accuracy rate.

### Waste Drone

Birmingham, AL

*Research Project*

Spring 2024

- Coded a Tello Drone using Python and a machine learning model which implemented an object-detection algorithm in order to process video footage and detect trash items and trash type. Program stored a digital log for users to view photos of trash and time trash was detected.
- Prototype to detect waste in order to further develop to detect license plates of passengers who were seen littering.

### Hopper's Fables

Birmingham, AL

*Research Project*

Summer 2022

- Expanded JavaScript, HTML, and CSS based website investigating how to strengthen math, reading, and computational thinking for 2nd graders in the form of an online story game, implementing new graphics, math components, and storylines.
- Abstract was published and presented at ACM-Midsouth Conference (2022).