

# Melanie Navaratna

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## EDUCATION

**Rice University** | *Houston, TX*

Expected May 2026

Bachelor of Science in Computer Science | Minor: Business | GPA: 3.62/4.00

Relevant Coursework: Web Development, Data Visualization, Concurrent Programming, Data Science (SQL, Deep Learning)

## INTERNSHIP AND FELLOWSHIP EXPERIENCE

**Information Security Analyst Intern**

May 2023 - August 2023

*Rice University Information Security Office (ISO), Houston, TX*

- Optimized the ISO's security operations processes by designing and documenting an API in JavaScript for querying contact information on 100+ high-value faculty/staff.
- Handled first-level triage and investigation of security incidents for 8000+ Rice community members.

**Maydm Summer Program Instructor**

June 2024 - August 2024

*Maydm, Madison, WI*

- Taught 15 middle- and high-school students from underserved communities about STEM topics 40 hours per week.
- Formulated and documented computer science and engineering lessons, advised students' independent projects, composed rubrics, and graded project presentations.

**D.E. Shaw Momentum Fellowship**

March 2024

*DE Shaw & Co, New York City, NY*

- Selected as one of ~40 students to participate in a three-day finance fellowship program at the D.E. Shaw Company.
- Engaged in interactive case studies, seminars led by employees and visiting professors, and sessions with the staff.

## PROJECTS / RESEARCH EXPERIENCE

**Machine Learning for Improving Non-American English Speech Recognition**

December 2020 - February 2021

*Pennsylvania Junior Academy of Science, Pittsburgh, PA*

- Developed an RNN machine learning model using supervised learning in Python to improve the accuracy of existing speech recognition by 74% for people with non-American English accents, exposing and addressing racial biases.

**Hydraulic Prosthetic Hand Prototype**

November 2019- February 2020

*Pennsylvania Junior Academy of Science, Pittsburgh, PA*

- Modeled a hydraulic prosthetic hand prototype under \$60 to address the need for more affordable models.
- Designed and 3D-printed a prosthetic hand in AutoCAD and assembled a hydraulic motor system programmed in C++.

## WORK EXPERIENCE

**Rice Bikes Personnel Manager and Manager on Shift** | *Rice University, Houston, TX*

February 2023-Present

- Designed the front-end of the web-based Rice Bikes App used to track 10,000+ transactions using React with TypeScript, JavaScript, HTML, and CSS.
- Recruit and onboard new hires, supervise 40+ employees and a cross-functional team of managers, and coordinate community outreach events.

## VOLUNTEERING

**Biokind Analytics Team Lead (Rice University Chapter)** | *Rice University, Houston, TX*

February 2024-Present

- Utilize Python and R to statistically analyze donor and patient data to inform 3 healthcare non-profits on successful fundraising efforts and patient programs.
- Manage a team of 3-4 students and act as a liaison between the non-profit and the students.

## SKILLS

Computational: Python, JavaScript, TypeScript, HTML, CSS, Git, React, Front- and back-end web development, Go, G Suite

Administrative: Leadership, Organization, Communication, Teamwork, Teaching