Mikayla Deehring

Mikayla.Deehring@rice.edu | https://medeehring.github.io/ | github/medeehring

My research leverages wearable sensors and interpretable machine learning to develop personalizable platforms for at-home rehabilitation and remote patient monitoring that improve health outcomes and promote equity in healthcare.

2023 - Present	**Graduate Research Assistant** Yamagami Lab | Rice University | Houston TX Advisor: Dr. Momona Yamagami *Research Projects:* *Biosignals for Rehabilitation* • Use data collected from commercially available smart watches to investigate the relationship between biosignals and exertion, and remotely track adherence to rehabilitation. *Exergaming for Pediatric Stroke Survivors* • Develop and evaluate an end-to-end platform for sensor and exercise agnostic exergmaing using user-centered design that benefits the understudied population of pediatric stroke surviviors.
2021 - 2023	**Undergraduate Research Assistant** CNEL Lab | University of Houston | Houston TX Advisor: Dr. Nuri Ince *Research Focus: Developing accelerometer based platform to monitor tremors in Parkinson's Disease patients*
Summer 2020	**Houston Early Research Experience** University of Houston | Houston, TX Advisor: Dr. Amin Kiaghadi *Research Focus: Urbanism in Houston*

EDUCATION

2023 - 2025	**MS, Electrical & Computer Engineering** | Rice University | Houston, TX GPA: 3.89 | Area: HCI, Machine Learning, Remote Patient Monitoring Advisor: Dr. Momona Yamagami
2019 - 2023	**BS, Biomedical Engineering** | University of Houston | Houston, TX GPA: 3.89 | Dean's List | University Honors | *summa cum laude*

HONORS & AWARDS

2022	University of Houston Biomedical Engineering Inspiration Award
2022	University of Houston Undergraduate Biomedical Engineering Junior of the Year
2019 - 2023	University of Houston Dean's List
2019 - 2023	Academic Excellence Scholarship

TEACHING

Fall 2024
Teaching Assistant

Neural Interface Engineering Lab (Rice University, Houston, TX)
- Administer weekly lab with experiments related to biosignal recording and analysis.

INTERNSHIPS

2022-2023
Starling Medical, (Medical Device Startup)

Research and Design Intern
Mentor: Fergus Wong
- Designed and prototyped an at-home uroflowmetry device to monitor patients with benign prostatic hypertrophy and other conditions causing lower urinary track symptoms.
- Designed and executed study to test the ability of a urinalysis device to measure the concentration of multiple analytes in solution based on plausible biological ranges.

MENTORING

Undergraduates

Anya Sathyajit (2024 - present)
- Researching how biosignals can be used to predict exertion during rehabilitation exercise.

Tony Martinez (Summer 2024)
- Creating a VR application in Unity to measure visual and motor attention
- 2024 Rice University Summer Undergraduate Research Fellow

SERVICE

2024 - Present
Rice University

Electrical and Computer Engineering Grad Women and Gender Minorities Digital Chair

- Founding officer of organization
- Coordinated events, compiled resources on an online page, lobbied department for changes that benefit gender equity

2022 - 2023
UH BMES

UH Biomedical Engineering Society Department Chair

- Organized society socials, managed membership, administered member point system, and assisted in the general function of the society.
- Coordinated the peer mentorship program

REFERENCES

Momona Yamagami
Assistant Professor, Electrical & Computer Engineering
Rice University, Houston
6500 Main St, Houston, TX 77030
momona@rice.edu | +1 (713)348-5932