

# SHWETA PATI

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## EDUCATION

### University of Michigan

Ann Arbor, MI

*Bachelor of Science in Engineering Electrical Engineering (Expected Minor: Computer Science)*

May 2024

GPA 3.932/4.00

Coursework: Introduction to Signals & Systems, Systems Designs I, Electromagnetics, Introduction to Electronic Circuits, Programming & Introductory Data Structures, Accelerated Programming, Financial Decisions

### Michigan Technological University / Houghton High School

Houghton, MI

*Dual Enrollment*

May 2020

GPA 4.00/4.00~Valedictorian

## EXPERIENCE

### Direct Brain Interface Laboratory, University of Michigan

Ann Arbor, MI

*Software Engineering Intern*

May 2021-Present

- Developed and optimized machine learning algorithms to improve the accuracy of Brain-Computer Interface technology (BCI) that will help people with physical impairments.
- Performed statistical analysis and optimized variables to do a cost-benefit analysis of the P300 Certainty method used by the BCI.

### Electrical Engineering and Computer Science Department, University of Michigan

Ann Arbor, MI

*Research Assistant*

May 2021-Present

- Investigated possibilities of expanding autonomous shopping to large malls and supermarkets.
- Collaborated with a team of developers from the AiFi company to develop a realistic online simulation for a supermarket using Unity and C#.
- Designed and built a machine learning system for the online simulation that is used to collect/produce data and mimic the real-life weight sensors that are used in analyzing which purchases are made by customers.

### School of Public Health, University of Michigan

Ann Arbor, MI

*Media Assistant*

September 2020-May 2021

- Facilitated technical support for professors and students to enhance online learning during the academic year.

## PROJECTS

### Michigan Neuro-prosthetics

Ann Arbor, MI

*Electrical Hardware Sub-Team Member*

September 2020-Present

- Developed low-cost prosthetic arms for children in need as a member of a multidisciplinary team of undergraduate students.
- Designed and tested circuits that transfer signals from the child's arm to the prosthetic and increase mobility.
- Developed an embedded system with touch screen and Bluetooth components to improve the Silver Hand.
- Designed and tested a new model of an electrical myography sensor to improve the amplification of arm signals.

### Hotshot Horizons

Ann Arbor, MI

*Software Lead and Developer*

September 2020-December 2020

- Collaborated with a team of 3 students to design, build, and test a basketball video game that helps children with Autism Spectrum Disorder.
- Delivered progress reports, reference manuals, and presentations to communicate effectively with the client.

## SKILLS

*Programming & Tools:* C/C++/C#, Python, R, SAS, MATLAB, Mathematica, LTSpice, KiCad

*Languages:* English, Spanish, Hindi

## ACTIVITIES

Michigan Neuro-prosthetics Team

September 2020-Present

Phi Sigma Rho

January 2021-Present

University of Michigan Mentorship Program

September 2020- December 2020