

ROSHNI MATHEW

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Education

University of Illinois at Urbana Champaign

August 2022 – May 2026

B.S. in Computer Engineering

GPA: 4.0/4.0

Coursework: Data Structures and Algorithms, Analog Signals and Systems, Neuroscience for Engineers, Differential Equations

Hiroshima Institute of Technology

May 2023 – July 2023

Coursework: Japanese I, Japanese II, Japanese Culture

Awards

- Dean's List, Clare Booth Research Scholar, Technip FMC Scholar

Experience

OTCR Consulting

October 2022 – Present

Project Manager

- Formulated a pricing strategy for a med-tech startup. Led 5 interviews with neurosurgeons and competitor companies.
- Developed a multi-faceted recruitment plan for a University of Illinois school, targeting younger applicants. Wrote 6-7 whitepapers about competitor schools and created a ranking metric to compare schools.
- Directed a team of 4-5 members, consolidating information from 28 past projects into a user-friendly, accessible database

Human Dynamics and Control Laboratories

February 2023 – Present

Undergraduate Research Assistant

- Led the development of an app that controls a robotic arm task trainer.
- Implemented a serial Bluetooth communication protocol, integrating Arduino, HC-05 Bluetooth module, and Android Studio, establishing a seamless wireless connectivity between the app and robotic arm.
- Programmed ML algorithms using python to detect stress and anxiety using wearable sensors.

Disruption Lab

February 2023 – Present

Software Engineer

- Created a Metaverse initiative utilizing AR/VR technologies to construct a virtual rendition of the School of Business facility, meant to enhance international student engagement with the university.

Engineering Open House

May 2023 – Present

Director of Advancements

- Started a robust collaboration with the University Advancements Office and over 15 departments and directed a townhall with liasons from each department. Expanded our outreach to alumni.

Loyola University of Chicago Software Systems Laboratory

July 2022 – August 2022

Research Assistant

- Constructed a network file system, enabling seamless access to server files from within the cluster environment
- Developed a dynamic IP address assignment protocol to allocate IP addresses to six NVIDIA Jetson Nanos

Projects

Robotic Car | *Circuits*

January – May 2023

- Engineered a robotic car with the ability to respond to loud sounds by changing its direction.
- Designed a four part circuit, combining components from rotor movement to microphone and amplifier configurations.

Battleship | *C++*

June – July 2023

- Programmed a Battleship Game in C++, featuring interactive combat and player-versus-computer gameplay.
- Improved the computer's algorithm by reducing moves by 30% by implementing the use of stacks

LED Cube | *Circuitry*

January 2023 – Present

- Constructed a LED Cube by executing intricate soldering work, meticulously assembling 216 LEDs to craft the cube.
- Programmed the cube to execute 3 LED patterns using C and Arduino

Technical Skills

Programming Languages: C/C++, Python, HTML/CSS

Languages: Japanese (Intermediate)

Software/Hardware: Arduino, Android Studio, 3D Printing, Soldering