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📍 Worcester, MA | Latham, NY

EDUCATION

2025 - 2029

WORCESTER POLYTECHNIC INSTITUTE

- Bachelor of Science in Robotics Engineering
- Electrical and Computer Engineering Minor
- Mechanical Engineering Minor

CERTIFICATIONS

- Harvard CS50X (2021)
- Harvard CS50W (2022)
- Congressional App Challenge Ambassador (2024)
- Oracle Royal Technosoft Java Programmer (2021)

SKILLS

- Leadership
- Project Management
- Web Frontend
 - HTML, CSS, JavaScript
- Java Proficiency
- Basic SQLite3
- Django and Flask Python Framework
- Wiring, Soldering
- Breadboard and Circuit Prototyping
- Microcontroller Programming
- Arduino and Raspberry Pi
- Internet of Things (IoT) experience

HONORS

- Winner, 2024 Congressional App Challenge. NY District 20
- "Code Whisperer" Award - Shaker Robotics Team 2791
- "Exiting in Excellence"- Shaker Robotics Team 2791
- National Honor Society Scholar
- A.P. Scholar

KUSH MALWATKAR

EXPERIENCE

2021 - 2025

Shaker Robotics FRC #2791

Project Manager, Technician, Programming Lead

- Led 100+ person team; maintained documentation; sustained inter-subteam communication.
- Robot and battery management for competitions; ensuring safety and efficiency of robot pits
- Led and managed code writing and version control
- Managed fundraisers and demonstrated robots to sponsors and donors

2022 - 2023

Shaker High School Mechatronics Club

Founder, President

- Founded Mechatronics club to teach small-scale embedded systems applications
- Introduced circuits, electronic sensors, effectors, servo motors, LED's, and more
- Grew club membership to 30+ with interactive demonstrations and engaging activities

2024 - Present

Local Community

Leader, Mentor

- Mentored 30+ students at a local middle school robotics club; guided design, programming, and construction of LEGO Spike Prime Kits
- Renovated website for KKCD, an ethnic community in the area, for improved communication within the organization
- Taught online summer classes for introductory computer science, web development, and mechatronics/ embedded systems to 50+ students

Summer 2024

Rensselaer Polytechnic Institute

Intern, Researcher

- Assisted with research on novel cathodes for cutting-edge aqueous aluminum-ion batteries
- Experimented with cathode loadings to improve battery efficiency and capacity over 100 charge cycles
- Presented research at the Greater Capital Region Science & Engineering Fair at RPI

PROJECTS

- Designed, built, and programmed a 4-bottle water consumption indicator using an Arduino Nano and sensor integration.
- Designed, built, and programmed a US-wide weather map showing temperature, precipitation, and air quality powered by an ESP-32 chip running custom C++ code with API integration
- Built an abrasive drum to remove peanut chaff more efficiently
- Built and programmed automated blinds that run with DC motors
- Built a motion-sensored LED strip in the stairway for safety
- Designed and programmed a song database with add, delete, and editing functionality
- Designed and programmed an RSVP app used for 400+ invitations