

Umang Sharma

Princeton, NJ

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SKILLS

Technical Skills: Robotics, Raspberry Pi, Arduino, IoT, Machine Learning, Artificial Intelligence, Front End Development, Networking, Computer Systems, Computer Repair/Troubleshooting, Leadership, People Management, DEI, Social Entrepreneurship, Communication, Social Media Marketing, Adobe Suite (Lightroom, Photoshop, Premiere Pro, etc.)

Programming Languages & Tools: Java, Python, C++, HTML/CSS, JavaScript, Arduino, LaTeX, TensorFlow, OpenCV, Google Colab, VS Code, Replit, GitHub

Languages: English, French, Hindi

EDUCATION

High School Diploma (Graduation: 2026)

Princeton, NJ

Princeton Day School

- Relevant Coursework: AP Physics C: Mech, Post AP CS, Calculus II (At UC Berkeley Extension), Calculus AB, AP CSA, AP Computer Science Principles, Honors Physics, Object Oriented Programming, Intro To Computer Science
- Activities: Computer Science Club - Co-Head — Workshop leader — Tech and Design, Makers' Club - Co-Head, Secretary-Treasurer of the Student Council, Pickleball Club Co-head, Science Olympiad A Team, VEX Robotics, Model UN A Team, APIDA Affinity Group - Mentor, Theater Tech Crew + House Manager, Varsity Tennis, JV Squash

June - August 2024

Cambridge, MA

Harvard Secondary School Program

- Courses: DGMD S-14 Wearable Devices and Computer Vision (Grade: A), DGMD S-17 Robotics, Autonomous Vehicles, Drones, and AI (Grade: A)

EXPERIENCE

Team Lead

Jun 2025 – Present

Tufts IDEA Labs

- Leading a 5-person team with Professor James Intriligator on a multisensory VR platform for individuals with synesthesia, coordinating design, testing, and deployment.

Research Intern

Aug 2025 – Present

Harvard Medical School

- Designed and tested a heat-resistant IoT smart switch with Prof. Afshar, improving safety and accessibility for mobility-limited users by adding embedded controls.

Co-Founder & Chief Impact Officer

2024 – Present

Nivaran

- Built a web app that incentivizes underserved neighborhoods to reduce urban heat; reached 1,200+ participants across 40+ buildings with 75% reporting cooler homes.

Intern

July - August 2023

Tech Mahindra

- Worked with the Makers Lab team to develop a streamlined connection method for smart robots using ESP32, enabling seamless user connectivity.
- Collaborated with engineers to create innovative IoT solutions, gaining hands-on experience in robotics and wireless technologies.

Developer & Panelist

May 2024 – Sep 2025

Student Internet Governance Forum (SIGF)

- Led two AI ethics and cybersecurity summits (100+ registrants) and secured four partnerships across 10 countries; built resources and demos for student attendees.

Camp Counselor

Jun - Aug 2023

Princeton Day School

- Instructed children in squash, fostering skills development and teamwork among participants aged 5 to 13.
- Coached K-8 squash, leading 120+ matches; mentored 30+ juniors and built two IoT tools to improve training and performance tracking.
- Managed camp activities and ensured a safe and engaging environment for all campers.

Summer Intern

Aug 2022

Pyrotech Electronics Pvt Ltd

- Assisted in networking tasks, including assembling Cat 5 cables and setting up network printers, contributing to overall operational efficiency.
- Soldered components for PCB assemblies and supported R&D initiatives for IoT product innovations.

PROJECTS

Jdable Projects — Autonomous Wheelchair, Braille Keyboard, IoT Cane

- Built low-cost mobility and access devices (wheelchair, \$10 braille keyboard, IoT cane) that improve independence for people with disabilities.

The Jewelers Box

- Arduino-powered display with keypad access and load-cell monitoring; alarms and indicators trigger when items are removed.

Sustainability Station (Compost Duty Device)

- IoT sensor hub that tracks temperature and humidity to reduce food waste in kitchens; surfaces real-time conditions to staff for faster interventions.

IoT Beehive Keeper

- Built a solar-powered box to log hive humidity, temperature, and sound, enabling hands-off health checks for the school apiary and informing hive interventions.

COMMUNITY SERVICE

Founder and CEO

2023 – Present

Jdable

- Founded a nonprofit to enhance technology access for special needs populations, focusing on breaking down barriers and promoting inclusivity through innovative solutions.
- Led the development of affordable technology projects and events such as tactile geometry kits, tactile navigation tools, accessible keyboards, IoT canes, and wheelchairs aimed at simplifying and increasing accessibility, impacting communities locally and globally.
- Served 1,000+ direct disability beneficiaries; reached 100,000+ people through deployments/events/digital campaigns. Raised \$500k+ from donors and companies such as Google, Canva, and Stripe, and have partnered with over 25 different nonprofits, centers for disabilities, and companies to bring these products.

Technical Director & Tutor

Mar 2024 – Present

Student Code Alliance

- Established 64 branches in 6 countries; tutored 4500+ youth; hosted mindful-tech hackathons for 250+ participants; trained 300+ tutors. Alongside setup, I am the webmaster and develop educational material for all branches.

Founder & Mentor

2021 – Present

PC Workshop

- Conducted hands-on workshops teaching 5th - 12th graders how to build personal computers and basic programming skills, empowering the next generation of tech enthusiasts. Workshops conducted in Bihar, Princeton Public Library, Princeton Day School, and PantherHack. Impacted 1k+ students.

HONORS & AWARDS

Publications

MIT URTC & International Journal of Science and Research

- *IoT Smart Cane for the Visually Impaired*. Presented at MIT's Undergraduate Research Technology Conference (URTC); describes a low-cost navigation aid using sensors and embedded ML for real-time obstacle awareness. [arXiv/URTC](#)
- *Recompose: A Real-Time Vision and Feedback System to Reduce Food Waste*. Peer-reviewed in IJSR; combines depth vision with behavioral feedback and showed a 37% reduction during a five-day school pilot. [DOI](#)

Patents

Indian Patent Office

- Jdable Assistive Braille Keyboard and Learning System for the Visually Impaired (Publication No. 202541000052)
- Jdable Navilo — A Multi-Sensor Autonomous Wheelchair for Intelligent Indoor and Outdoor Mobility

Service Awards

Various

- National honoree, Daily Points of Light Award for community service impact through Jdable.
- Gold & Silver Presidential Service Awards for 250+ volunteer hours and community impact.
- Princeton Day School Gold & Silver Service recognition.

Hackathon Awards

Various

Multiple Events

- 1st Place at *PennApps Classic (PClassic)* for *Educade*.
- 2nd Place Prize (\$200) at *Big Red Hacks* for *Educade* (Apr 2025).
- Best Education Hack at *PantherHack 2025*.
- Best Social Hack at *PantherHack 2024* for Therapist AI.
- 3rd Place Prize (\$500) at *HackBAC 24* for *Greenbox*, addressing food insecurity in BIPOC communities.
- 1st Place in Hardware at Princeton Day School Hackathon 2023 (150+ participants).

Science & Engineering Awards

Mercer Science & Engineering Fair

- 3rd Place overall at the Mercer Science and Engineering Fair (2025).
- Special Award for Psychology from the American Psychological Association (2025) for *Recompose: Cognitive Composting*.
- CREST Gold Award for *Recompose*.

Other Awards

Various

- Outstanding Achievement nomination (Foxie Awards, theater).
- College Board Rural and Small Town Recognition.