Dhruv Patel
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EDUCATION

Rutgers University, New Brunswick, NJ May 2027
BS in Biomedical Engineering | Minor in Business Administration | Engineering Honors Academy
Relevant Coursework: Intro to Computers (MATLAB), Differential Equations, Intro to Experimentation, Honors Physics III, Honors Intro to Engineering, Honors Mechanics Statics, Biological Research Lab, Intro to Biomedical Engineering, Physiological Systems for BME

EXPERIENCE

Ideal Institute of Tech. & Center for AI Tech, *ML & Robotics Intern*, Pleasantville, NJ - Paid June 2025 – August 2025
- Built a fully 3D-printed robotic arm using stepper motors and microcontrollers; integrated computer vision and machine learning to enable autonomous object detection, classification, and movement execution.
- Designed and delivered an Arduino-based hands-on workshop curriculum, introducing students to embedded systems, sensor integration, and project-based learning through interactive mini-projects and real-world applications.

Jupiter Academy's Clinical Research Program, *Student*, Virtual June 2025 – current
- Comprehensive curriculum aligned with USFDA, Health Canada, and EU regulatory agency guidelines; skills and technical knowledge applicable to Clinical Trials and Bio-equivalence & Bio-availability (BA/BE) studies worldwide.
- Covers fundamentals of clinical trials, research methods, regulations, and good practices; prepares you for roles like Clinical Research Associate (CRA), Clinical Research Coordinator (CRC), and more.

NovoPedics Orthopedic Laboratory, *Researcher*, New Brunswick, NJ - Unpaid April 2025 – current
- Perform plasma extraction from collected blood samples to engineer biocompatible meniscus membranes.
- Conduct experimental trials, collecting and analyzing stress and strain data on the meniscus and surrounding ligaments.
- Developed and conducted comprehensive in vitro testing protocols to assess short- and long-term biological responses of engineered meniscus membranes to controlled mechanical and chemical stimuli.

Honors Design & Development Semester Project, *Member*, New Brunswick, NJ - Unpaid January 2025 – May 2025
- Created a software for a computer mouse designed for people with hand tremors. The software eliminates the shaking that appears due to hand tremors and makes it easier to navigate and click buttons.
- Created an ergonomical and tailored mouse design with straps that can be used by people with striated hand deformities.
- Chosen to present product at annual Honors Symposium in front of ~200 students and deans.

CompTIA ITF+, *IT Fundamentals Pro*, IT Professional Certificate, Virtual January 2025
- Introduction to basic IT knowledge and skills such as IT concepts and terminology, infrastructure, applications and software, software development, database fundamentals, and security.

Ideal Institute of Tech. & RobotLAB South Jersey, *Robotics Intern*, Pleasantville, NJ - Paid June 2024 – August 2024
- Designed and built an articulated LED Iron Man helmet using a microcontroller, while creating reports, documentation, financial sheets, and an assembly video and guide showing the full process on how to replicate the project.
- Research on the Ultracortex Mark IV helmet to record and manipulate EEG brain waves captured by different types of electrodes to wirelessly control different electronic devices and machines.

Dunkin', *Crew Member*, Galloway, NJ - Paid January 2023 – January 2025
- Provided customer service by handling food and drink orders, drive-thru operations, fixing broken receipt and POS machines, managed cash transactions and maintained financial records throughout the day.
- Trained/mentored many new hires, ensuring they had the proper job training and all the accurate paperwork to legally work.

Honors Intro to Engineering Semester Project, *Member*, New Brunswick, NJ - Unpaid September 2023 – May 2024
- Collaborated on a semester-long project addressing a human-centric, real-world problem.
- Developed a wearable system integrated into a fanny pack, utilizing ultrasonic sensors, microcontrollers, and a vibration motor to measure the distance between a person and an object.
- Implemented varying vibration strengths to warn and deter the person, based on the proximity to the object.