Edward Johnson

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Education

Rutgers University New Brunswick

B.S. in Electrical Engineering | GPA: 3.56 | Expected Graduation: May 2029

Projects

Voice Controlled Robot Arm | Arduino, Raspberry Pi, Fusion 360, PySerial, Speech Recognition | 2025

- Designed electromechanical robotic arm components using CAD modeling in Fusion 360 and fabricated prototypes through 3D printing
- Programmed an embedded system using Raspberry Pi and Arduino microcontrollers to process voice commands and transmit control signals via PySerial

Random Motion RC Car | Arduino, Onshape | 2025

- Programmed Arduino-based servo control and motor control for an RC car using embedded microcontroller hardware
- Developed randomized navigation logic to simulate autonomous movement behavior in a mobile embedded system

Fitness App | Node.js, React Native, AI Integration | Ongoing

- Developed a fitness app for tracking calories, workouts, and daily water intake
- Built a personalization algorithm to generate workout recommendations and calorie targets
- In process of publishing app on Apple Store

Experience

Target | Closing Expert | April 2026 – August 2026

- Maintained a stocked sales floor, supported checkout operations, and fulfilled online pickup orders

Black Rocket Assistant Teacher | Employee | May 2026 - August 2026

- Taught elementary and middle school students programming, robotics, and video game design

Leadership

FIRST LEGO League Mentor | Volunteer Mentor | Oct 2023 - Dec 2023

- Mentored fifteen 5th and 6th grade students in the engineering design process while building a LEGO-based robotics competition project, providing guidance on prototyping, problem-solving, and teamwork to help students prepare a competition-ready robot

Vice President of Technology and Design | High School FIRST Robotics Team | Sep 2021 - Dec 2024

- Led a 60-person team to its first appearance at the FIRST Robotics International Competition
- Founded CAD/CNC sub-team
- Directed robot design, systems integration, and fabrication efforts across multiple sub teams
- Designed components using CAD modeling and completed electrical wiring from system schematics

Course Work

Principles of Electrical Engineering 1 and 2 with labs | Jan 2026 - Present

- Got hands on experience with oscilloscopes, LTspice, soldering, and KiCad

Digital Logic Design | Jan 2026 – May 2026

- Learned logic gates, transistors, state- machines, and problem-solving skills

Skills

Programming & Hardware: Python, C++, Java, MATLAB, Arduino, Raspberry Pi, NumPy, Jupyter lab, KiCad

Design & Fabrication: Fusion 360, Onshape, CNC, 3D Printing, Machining, Soldering