Nainesh Chawda

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Technical Skills

Languages: C++, Java, Python
Hardware: Arduino, Raspberry Pi, Sensors, Motors
Digital Skills: Solidworks, Microsoft Office, Google Suite, Microsoft Teams
Creative Tools: Photoshop, Canva, Basic Video Editing

Relevant Experience

BioTron Mechanical Team Member | *C++, Python* September 2025 – Present

- Applied the project design life-cycle to develop outer and inner hand exoskeleton prototypes
- Created parametric 3D models in SOLIDWORKS and prepared parts for 3D printing and integration.

STEM Club | *Python, Java* October 2023 – June 2024

- Participated in weekly design/building competitions with 12 teams, demonstrating problem-solving skills and earning **2nd place overall** for the year

Robotics Club | *Python, Java* September 2023 – June 2024

- Collaborated with a group to program the back-end software of a robot to compete in a sumo wrestling challenge, collaborating within a 3-member team
- Programmed a robot with pre-planned strategies to address anticipated challenges, advancing to the final round

Projects

Motorized Assistive Device Prototype November 2025

- Designed a motorized assistive arm, producing 3D-printed components and validating assembly, range of motion, and tolerances through physical testing.
- Integrated MG996R high-torque servo motors with an Arduino, along with basic sensors and power regulation, to test controlled actuation and system performance.

Pulse Oximeter July 2024

- Designed and built a simple pulse oximeter using Arduino and optical sensors to monitor heart rate and blood oxygen levels
- Programmed sensor data acquisition and real-time display on an LED module

Wearable Heart Rate Monitor May 2024

- Designed and built a wearable heart rate monitor using Arduino and a MAX30102 sensor alongside optical sensors
- Applied wearable electronics and hardware components to develop a real-time heart rate monitoring device

Work Experience

Team Leader June 2024 – August 2024
Durham Regional Police *Oshawa, ON*

- Coordinated and motivated a team to collect **3,150 items in 1.5 months**, providing critical support to Durham Outlook for the Needy
- Spearheaded and led a fundraising initiative that generated more than **$11,000 in two months**, supporting the continued services of Hearth Place Cancer Support Centre

Keyholder Nov. 2021 – Jan. 2024
Booster Juice *Ajax, ON*

- Achieved **1st out of 10 districts** in highest-gross sales during a promotional campaign, exceeding sales goals of other locations by a margin of **13.4%**
- Facilitated staff scheduling and shift management, ensuring smooth operations, and resolving workplace conflicts

Education

University of Waterloo Waterloo, ON
Bachelor of Applied Science in Biomedical Engineering *Sept. 2025 – Present*