

NATHANIEL A. HUDSON

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EDUCATION

WAYNE STATE UNIVERSITY

Bachelor of Biomedical Engineering
2024-2027

OAKLAND COMMUNITY COLLEGE

Associate in Science 2022-24

CORE COMPETENCIES

Team Leadership
Proficient in CAD software
Hands-on Focused
Entrepreneurial Mindset
Project Management
Machining Device Utilization
Proficient in C++

COURSE WORK

Computational Programming (MATLAB)
CAD Design (NX)
Technical Communications
Calculus 1 & 2
Anatomy & Physiology 1 & 2

CERTIFICATIONS

SolidWorks Additive Manufacturing
Microsoft Office
OSHA 10-Hour
Red Cross First Aid/CPR/Lifeguard

AWARDS

2024 FIRST Robotics District Champion x2
2024 FIRST Robotics Quality Award
2024 FIRST Robotics Judges' Award
2023 FIRST Robotics 35th Place - Worlds
2023 FIRST Robotics Mi State Champion
2023 FIRST Robotics Quality Award
2023 FIRST Robotics District Champion

ABOUT ME

I am a current student pursuing a career in Biomedical Engineering, specializing in Biomechanics and Prosthetics. I possess considerable experience in the development and design of innovative mechanical devices, along with documentation of processes and procedures. I thrive in hands-on environments, particularly in laboratory or workshop settings, and I am equally adept at collaborating with all organizational levels while engaging with clients and customers.

EXPERIENCE

LIFEGUARD/CONCIERGE

Beachwood Swim and Tennis Club, Troy, MI (May 2023 – Present)

- Developed process improvements, easily accessible task management tools, and Emergency Process workarounds.
- Certified Lifeguard, CPR, and First Aid by the American Red Cross

VALET/EVENT TEAM

StarTrax, Royal Oak, MI (June 2022 – Present)

- Valet for special events, including high profile clients
- Bouncer/Security, providing crowd control and risk mitigation

FIRST ROBOTICS COMPETITION - TEAM 7769 "THE CREW"

Oakland Schools Technical Campus - SE, Royal Oak, MI (August 2021- May 2024)

- Served as the student manager for the robot pit crew, overseeing troubleshooting, repairs, and quality inspections between matches.
- Directed the creation of customized parts using design software (Onshape), 3D printing (BambooLab), and machining tools (Mill, CNC Machine, Lathe).
- Accountable for conducting functional, mechanical, and simulation testing.
- Actively contributed to the development of the Judges Handbook, which encompassed concept design, process methodology, innovative documentation, and the integration of AI to enhance robot guidance and functionality.

FIRST ROBOTICS - FIRST TECH CHALLENGE (FTC) VOLUNTEER

Derby Middle School, Bloomfield Hills, MI (June 2020-May 2023)

- Assisted in establishing inaugural program and writing grant for funding
- Created program operating procedures for future team leaders
- Provided Blocks coding and VEX robot building training for 5 6th, and 7th grade students
- Using agile processes, assisted in designing, building, and testing to meet competition program requirements

FIRST ROBOTICS - FIRST LEGO LEAGUE (FLL) VOLUNTEER

Harlan Elementary School, Bloomfield Hills, MI (June 2019-March 2020)

- Assisted in establishing inaugural program and writing grant for funding
- Provided WeDo 2.0 coding and Lego robot building training for team of 12 5th grade students
- Supported team for competitions through acting as practice judge and offering improvement opportunities
- Mentored teams in development of team portfolio presentation