Carter Mitchell Betts

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EDUCATION

Ohio Northern University, – *Ada, Ohio* **August 2023 – Present**

- **Bachelor of Science in Mechanical Engineering** | Robotics Concentration, Computer Science Minor
- GPA: 3.95 | Expected Graduation: May 2027
- Presidential Scholarship Recipient

RELEVANT COURSEWORK

- Strengths of Materials
- Foundations of Design
- Thermodynamics
- Electric Circuits
- Fundamentals of Experimentation
- Object Oriented Programming
- Dynamics
- Material Science

PROFESSIONAL EXPERIENCE

Howmet Aerospace, Cleveland Ohio – *Process Innovation Engineering Intern* **May 2025 – August 2025**

- Conducted hands-on testing of lubrication methods in an industrial environment and supported integration into production systems alongside process engineering teams
- Engineered a custom viscometer from concept to completion, combining custom hardware design, circuit development, and embedded programming to reduce calculation turn around by a week on average
- Improved saw accuracy and scale reliability by integrating a height gauge cross-check and redesigning the scrap pusher face to minimize error

Howmet Aerospace, Cleveland Ohio – *Product Integrity Engineering Intern* **May 2024 – August 2024**

- Compiled all technical test data into interactive Microsoft PowerBI dashboard to increase analytic convenience
- Developed several R scripts to automatically perform critical calculations and increase efficiency by ~70%
- Designed, programmed, and assembled custom robotic testing rig to automate strain gauge drilling test and minimize error

Research Assistant, Ohio Northern University – *Syndactyly Optimization Project* **January 2024 – Present**

- Programming lead on team attempting to produce a cost-effective 3D scanner to optimize Syndactyly hand surgery
- Developed a Python embedded system to control a stepper motor, capture simultaneous images, process them, and generate a 3D model for surgical optimization
- Collaborating with a multidisciplinary team to translate engineering tools into orthopedic surgical applications

PROJECTS AND LEADERSHIP

Emergency Medical Services Payroll System Modernization **March 2025 – Present**

- Rebuilding the local EMS department's payroll system from ground up to replace outdated and unsupported legacy code
- Rewriting the application in Java to ensure long-term compatibility, portability, and support across modern platforms
- Collaborating with EMS leadership to align system features with operational workflows and compliance needs

Accessible Microwave Interface for Children with Disabilities **January 2024 – May 2024**

- Wired and programmed custom microwave interface to assist children with developmental disabilities
- Implemented computer vision software to read identification cards and communicate with microwave to cook for specific time interval

American Society of Mechanical Engineers – *Vice President* **March 2024 – Present**

- Organized and led bi-weekly meetings promoting technical discussion and student engagement
- Spearheaded a cross-organizational fundraiser that raised over $1700 for engineering initiatives

TECHNICAL SKILLS

Programming Languages: Python, Java, R, C++, Ansys Parametric Design Language, Microsoft Power Query

Software & Tools: SolidWorks, OnShape, Microsoft Power BI, Microsoft Excel, LTSpice

Hardware & Systems: Test Engineering, Embedded Systems, Circuit Integration, Arduino, Raspberry Pi