CONNOR BOSSARD

Gaithersburg, MD | (240) 778-4272 | connorbossard@gmail.com

EDUCATION

Expected May 2026 — **GEORGIA INSTITUTE OF TECHNOLOGY** — Atlanta, GA
MS Robotics
Concentration: Artificial Intelligence, Controls, Dynamics
GPA 4.00

May 2024 — **GEORGIA INSTITUTE OF TECHNOLOGY** — Atlanta, GA
BS Mechanical Engineering
Minor: Computer Science – Artificial Intelligence
GPA 3.94

EXPERIENCE

May 2025 – *Present* — **SANDIA NATIONAL LABS** — Albuquerque, NM
Autonomous Flight Intern

Aug 2023 – Present — **DART LAB AT GEORGIA INSTITUTE OF TECHNOLOGY** — Atlanta, GA
Research Assistant – Sandia National Labs
- Leveraged Deep Reinforcement Learning algorithms on 6 Degree of Freedom aerial vehicles to find vulnerabilities and defeat adversarial scenarios in high-fidelity simulations (AFSIM)
- Utilized Transfer and Curriculum Learning principals to decrease training time and improve performance of Deep Reinforcement Learning models
- Trained LSTM and Transformer models to create generalizable, light-weight adversarial models for rapid trajectory validation

May 2023 – Aug 2023 — **SHIELD AI** — Dallas, TX
Mechanical Engineering Intern
- Redesigned subsystem on UAS that significantly increased reliability while decreasing assembly time
- Modeled and fabricated multiple prototypes of the subassembly and down selected to a chosen design
- Utilized FEA and safety factors to assist in material selection and ensure strength of subsystem
- Presented redesigned subsystem to management for implementation in further releases of the aircraft
- Developed python interface to automate the visualization of flight controls data, leading to a 75% decrease in time spent visualizing data post flight

May 2022 – Aug 2022 — **PROCTER & GAMBLE** — Cincinnati, OH
Research and Development Intern
- Utilized PowerBI to visualize data, mockup enhancements and presented solutions for management
- Wrote a python script to automate the unification of data, saving the company 100's of hours annually
- Developed enhancements for two corporate systems, using both qualitative and quantitative metrics to measure success of implementation

PROJECTS

May 2022 – Aug 2022 — **BALL BALANCING ROBOT** — Atlanta, GA
- Modeled and fabricated a robot consisting of 3D printed parts
- Interfaced Arduino with three stepper motors and a resistive touch pad to determine ball's location
- Utilized inverse kinematics to determine how motor movement would impact platform orientation
- Integrated PID controller (C++) to balance a ball, using a resistive touch pad for orientation feedback and the motors for corrective action

Aug 2021–- Dec 2022 — **EPIC LAB AT GEORGIA INSTITUTE OF TECHNOLOGY** — Atlanta, GA
Undergraduate Research Assistant
- Developed enclosure for exoskeleton electronics, accounting for vibrational and environmental stresses
- Contributed to the development of a hip exoskeleton that uses robotic augmentation technology to restore human movement in individuals with mobile disabilities
- Implemented python based micro controller to drive movement of the exoskeleton
- Integrated python GUI, allowing users real-time access to sensor metrics via a wireless socket connection

SKILLS

Certifications: Intro to FEA – Udemy, Linux for Robotics – The Construct, C++ for Robotics – The Construct, Python 3 Programing–- University of Michigan
Relevant Coursework: Deep Reinforcement Learning, Machine Learning, Artificial Intelligence, Perception and Robotics, Non-Linear Controls, Linear Controls, Machine Design, Materials and Manufacturing, Heat Transfer, Computer Organization, System Dynamics, Data Structures and Algorithms, Fluid Mechanics
Software: Python, Julia, C++, MATLAB, ROS, AFSIM, SolidWorks, Java, Arduino, Raspberry Pi