Mitch Boucher

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Objective   Seeking full-time opportunity in the field of control systems or robotics.

Education   **Bachelor of Science, Electrical Engineering**   **Feb 2025**
Rose-Hulman Institute of Technology | Terre Haute, IN   **GPA: 3.93/4.0**
Minor in Robotics

Skills   **Software:** Matlab, Labview, Solidworks, Verilog, Vivado, Spice, Pandas
Technical: Soldering, Gas-Tungsten Arc Welding Certified, Machine Shop, 3D Printing
Programming: Java, C++, Python
Clearance: Secret Level Clearance

Experience   **Electrical Engineer Intern**   **June - August 2024**
NAVSEA | Crane, IN
- Designed and built an analog to digital converter for a photon absorption array
- Programmed scripts to calculate the number of single event upsets in irradiated memory
- Developed an algorithm to predict single event upset probability based on previous data
- Tested single event effect data and checked for anomalies

Product Test Engineer Intern   **June - August 2023**
Texas Instruments | Phoenix, AZ
- Created scripts for future-proof parasitic measurements and diagnostic updates
- Designed, soldered, and assembled microchips based on custom schematics
- Programmed pre-build diagnostic tests for a verification board to streamline testing
- Re-designed and analyzed production boards to enhance accuracy and improve constraints

Design Intern   **May - August 2019**
FAST Semiconductors | Fullerton, CA
- Assembled and soldered microchips in accordance with custom-designed schematics
- Collaborated on private orders to deepen expertise in product design and manufacturing
- Tested various components in microchip processing to ensure mechanical security

Projects   **Open-Source Modular Infusion Pump**   **August – February 2025**
- Designed and manufactured primary and backup power circuit to ensure consistent and readily available power options
- Designed following IEC 60601-02-24 (Medical standards for Infusion Pumps)
- Collaborated with team members to integrate UI and IO submodules and motor controller feedback sensors

Mono-pedal Evolutionary Robot   **March – May 2025**
- Designed a monopedal walking robot to be integrated with an evolutionary neural network and machine learning to optimize gait
- Engineered mechanical components and integrated sensors to ensure stable movement and precise feedback during operation

Autonomous Mobile Robot   **November – February 2024**
- Programmed a robot to move based off of varying sensors including: thermal, optical, ultrasonic, and light
- Programmed and calculated inverse kinematics equation to control a robot arm to positions