

Braden W. Close

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Education

University of Florida | Gainesville, FL

June 2022 – May 2026

B.S. Mechanical Engineering | Minor: Electrical Engineering

GPA: 4.00/4.00

Relevant Coursework: Finite Element Analysis and Design, Computational Fluid Dynamics, CAD, Thermodynamics, Fluid Mechanics, Design and Manufacturing Laboratory, Numerical Methods, Dynamics, Mechanics of Materials, Control of Dynamic Systems, Heat Transfer, Circuits 1, Vibrations, Manufacturing Engineering

Experience

Flight Test Instrumentation Engineering Intern – Lockheed Martin Aeronautics | Patuxent River, MD May 2025 – August 2025

- Attended control room for F35 flight science testing, monitoring telemetry stream quality and instrumentation status
- Developed projects in TTCWare for testing of instrumented alternative mission equipment (AME), backup projects for potential preflight changes to weapon configuration sheet (WCS)
- Reviewed instrumentation calibrations in master measurement list (MML) using appropriate conversions
- Quoted pricing and configuration options for new freestyle data acquisition system, including cRIO with Simulink based control functionality and cDAQ with FlexLogger GUI
- Constructed wiring diagrams for flight test instrumentation lab (FTIL) documents accompanying component selections for repeater interfacing cables and pit test MWDAU card stack; assembled corresponding wiring harnesses
- Investigated source of timing rollover error in MGPS cards through simulation and monitoring
- Familiarized with FTI procedures and IRIG telemetry standards for CH4 PCM formatting and CH11 data transfer

Quality Assurance Intern – Energy Hardware | Pensacola, FL May 2024 – August 2024

- Completed sample part inspections, ensuring compliance with engineering drawings (GD&T) and filing corresponding CAVs for quality database and inventory management in AniTa
- Determined causes of product defects and appropriate courses of action for reworking
- Inspected in-house assemblies and worked with production lines to improve efficiency of hardware kit building

Undergraduate Research Assistant – Institute for Networked Autonomous Systems | Gainesville, FL January 2024 – Present

- Designing synthetic jet actuator optimized for underwater noncohesive sediment scouring
- Previously studied organic superhydrophobic surfaces and contact angle measurement with MATLAB edge finder

Teaching Assistant for Circuits 1 Lab & FEA | Gainesville, FL August 2024 – May 2025

- Provided instruction for lab procedures and coursework; aided student projects involving applications of analog circuit elements and development of FEA models for part optimization

Technical Projects

SIMIODE Challenge Using Differential Equations Modeling (SCUDEM) October 2024 – November 2024

- Developed differential equation model for heavy metal bioaccumulation in human systems with team of three undergraduates; solved with numerical approach using SageMath for various input functions
- Published results in UF Journal of Undergraduate Research; presented in math symposium

Finite Element Modeling September 2024 – December 2024

- Modeled torque arm using plane stress elements to complete convergence analysis, compare performance of various element types (CST, etc.), and optimize design parameters; fully stressed design with iterative approach

Involvement

Tau Beta Pi Engineering Honor Society | Gainesville, FL

September 2024 – Present

- Engaged with community service projects including GatorTRAX education program and street cleanups

Gator Powerlifting Club | Gainesville, FL

July 2022 – August 2024

- Executive board fundraising officer for 2023-24 school year

Skills, Certifications, Awards

- Software: MATLAB, Microsoft Office Suite, Solidworks Associate, Onshape, Autodesk Inventor, LTSpice, AniTa, LabVIEW, Abaqus FEA, TTCWare, PDM, JDL, MML, ALIS
- Awards: Dean's List Fall 22, Spring 2025, Presidents List Spring 2023-Fall 2024, SCUDEM IX Outstanding Submission, UF University Scholar Recipient
- Active secret security clearance valid thru 05/30, current and valid passport thru 10/31