Adam Jones

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EDUCATION

University of Michigan, Ann Arbor, Michigan   GPA: 3.99 (unweighted)

2021 - 2025 **Bachelor's in Aerospace Engineering** with **minor in Computer Science**

2025- 2025 **Master's in Aerospace Engineering**

Awards: Dean's Honor List (all semesters), James B. Angell Scholar (2023), Aerospace Engineering Centennial Scholarship (2023)

Languages/Tools: C++, Python, C, MATLAB, Cameo/SysML, Simulink, SMW, NX, Fusion 360, STAR-CCM+, Excel VBA

Relevant Courses: Programming and Data Structures, Data Structures and Algorithms, Aerospace Computing, Linear Spaces and Matrix Theory, Discrete Math, MBSE Fundamentals, MBSE Tools/Methods, MBSE Leadership, Aerospace Controls, Space System Design

PROFESSIONAL EXPERIENCE

Collins Aerospace Systems Engineering Intern – xEVAS and Dragonfly TTS   May 2024 – Aug 2024

xEVAS PCAI - *Exploration Extravehicular Activity Services Power, Communications, Avionics, and Informatics*

- Analyzed driver chip architecture for two COTS display candidates to determine methodology for detecting and categorizing SEEs
- Determined necessary hardware and C-based software to interface with driver chips and inspect memory during live radiation testing

Dragonfly TTS – *Dragonfly Thermal Transport System*

- Analyzed line pressure drop under various flow conditions to determine worst-case sensor error to validate sense line configuration
- Determined check valve crack pressure under worst-case expected launch loads to verify pump assembly operation during launch
- Developed fan package leak allocation and estimated leak rates during test by leveraging legacy data to inform test rig development
- Converted several legacy Excel VBA flow calculation functions to MATLAB scripts to perform listed analyses more efficiently

CORE Process Improvement – MBSE Development

- Developed simple fluid loop model in Cameo to validate common component library methodology and inform best practices
- Trailblazed behavioral modeling to demonstrate component library potential and validate interface structure

Collins Aerospace Systems Engineering Intern - Advanced Oxygen Generator Assembly (AOGA)   May 2023 – Aug 2023

- Presented 20 slides in AOGA dCDR with Boeing and NASA resulting in acceptance of paths to closure for relevant items
- Compiled/assessed compliance to all AOGA customer requirements and dormancy kit specification for dCDR preparation
- Analyzed AOGA post-maintenance leak test fidelity and dormancy preparation water crossover to confirm lack of hazards

Research Intern, Stedman Lab, Portland State University   May 2020 - Oct 2020

- Wrote Python program, CRUISE, to identify iterons in crucivirus genomes, including API to Geneious, a leading bioinformatics tool
- Identified iteron candidates in over 250 genomes for further analysis by Stedman Lab mentor and other interested parties
- Published in Microbiology Resource Announcements; 550+ publication downloads (journals.asm.org/doi/10.1128/mra.01123-22)

EXTRACURRICULAR EXPERIENCE

Bioastronautics and Life Support Systems (BLiSS) Student Project Team

BLiSS Co-President: managed BLiSS administration, logistics, and operations for 3 teams and 85 students   May 2023 – May 2024

- Reorganized organization structure and pursued heavy recruitment/retention to enable 3x organization growth in one year
- Oversaw project proposal development (schedule management, mentorship, and authorship), resulting in proposal acceptance

BLiSS CARGO Controls Lead: led controls subteam for NASA autonomous cargo management project   Aug 2022 – May 2023

- Led design of power delivery, sensor suite, motors, controllers, and system autonomous action elements
- Developed backend Arduino (C++) scripts to handle commands, item tracking, system motion, and execution interrupts for safety
- Verified and validated controls subsystem requirements to ensure hardware and software compliance with specification
- Participated in 9 successful design reviews with industry auditors and stakeholders, including SDR, SRR, PDR, CDR, and FRR

Michigan Sustainable Aviation with General Electric (M-SAGE) Student Project Team

M-SAGE Director: led successful high-performance sustainability demonstrator MBSE project with GE   Mar 2023 – May 2024

- Directed 4 successful design reviews with industry auditors: SRR, PDR, CDR, and FRR
- Used Siemens Teamcenter MBSE environment and other tools for architecture development, analysis, and project management
- Worked through project lifecycle, including requirements cascading, CONOPS, modeling, design, production, and V&V

Directed Research, In-Space Thrust Estimation under Prof. Oliver Jia-Richards, University of Michigan   Aug 2024 - present

- Improving on prior work by Prof. Jia-Richards demonstrating optimal measurement timing to minimize thrust
- Investigating impact of thrust vector direction on propulsive thrust estimation uncertainty during cooperative in-space thruster firing
- Determining optimal thrust vector direction for a given orbit, thruster duty cycle, and measurement sequence using MATLAB