Rawan Aljaber

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PURPOSE: Seeking full time, in-person Systems, Test, or Operations Engineering position. Available immediately.

EDUCATION

University of Michigan – *Master of Engineering in Space Engineering* **GPA: 4.0/4.0** | *May 2025*
Relevant Coursework: Spacecraft Systems, Engineering for Space Environment, Space Debris Remediation

University of Michigan – *Bachelor of Science in Engineering in Aerospace Engineering* **GPA: 3.5/4.0** | *May 2024*
Relevant Coursework: Model Based Systems Engineering (MBSE), Aerospace Instrumentation

PROJECT EXPERIENCE

NASA – JPL Uranus Moon Penetrator Investigation Project Team *Jan 2025 – May 2025*
System Engineering Lead

- Co-developed secondary satellite mission concept to enhance science return of NASA Uranus Orbiter and Probe mission
- Decomposed customer needs into detailed, traceable requirements, ConOps, and system budgets with verification plans
- Led systems team through statement of work, FMEA risk analysis, Earned Value Analysis, design trades, design reviews

High Altitude Balloon Mission *Jan 2024 – Apr 2024*
Flight Termination Lead

- Designed flight termination unit on custom Printed Circuit Board (*Altium*) integrating electro-mechanical hardware
  - Failure: Relay failed in cold conditions due to specification oversight, despite other components being cold-resistant
  - Fix: Polyimide heater improved performance, but too high risk, prompted improvements to camera power system
- Optimized camera system for -60°C space temperature, extending video recording capability from 1.5 to 8+ hours
- Executed subsystem and system thermal, vibration, and shock tests and configured test setups with data acquisition

Michigan - Sustainable Applications for Aerospace Vehicle Engineering Project Team *Sep 2022 – Apr 2023*
System Engineering Lead & Risk Manager

- Led interdisciplinary project team for humanitarian UAV through industry design cycle of SRR, PDR, CDR, and FRR
- Developed new guidelines to enhance testing procedure and system integration, expedited testing schedule by ~20%
- Ran adaptable test plans with sensitive instrumentation, tools, facilities (load cells, pitot tubes, 5'x7' & 2'x2' wind tunnels)

WORK EXPERIENCE

MIT Lincoln Laboratory (Federally Funded Research and Development Center) **Boston, MA**
Space Systems Assembly, Integration & Test Intern (Held Interim Secret Clearance) *May 2024 – Aug 2024*

- Tested sensitive payload subsystems in cleanroom with thermal cycling, lasers, thermal cameras, and DC power supplies
- Analyzed and documented data for laser tests/procedures in accordance with SMC-S-016 standards to ensure compliance
- Proposed space debris mitigation technology concept to improve space safety in intern contest, placed top 5 of 60 teams

Space Physics Research Lab (SPRL) - Intelligence Advanced Research Projects Activity (IARPA) **Ann Arbor, MI**
Lab Test Engineering Intern *May 2025 – Present*

- Built components for experimental rig simulating space debris collisions utilizing Naval Research Lab's particle accelerator
- Streamlined test workflows with online system, improving accessibility and turnaround for engineers, students, customers

Adaptable Powerful Transformative (APT) Solar Solutions Inc. **Ann Arbor, MI**
Prototype Engineering Intern *Feb 2025 – May 2025*

- Simulated (*MATLAB)* component for vertical solar prototype to boost energy output by ~50% over traditional solar farms
- Led $200K DOE SBIR proposal for vertical solar tech, reducing land use thus advancing cost-efficient, high-yield designs

Integrated Design of Environmentally-Friendly Aerospace Systems (IDEAS) Lab **Ann Arbor, MI**
Research Assistant *May 2023 – Dec 2024*

- Taught graduate student team MBSE concepts (*SysML, MagicDraw*) for design of novel aircraft propulsion technology
- Paper 2nd author: *Predicting Conceptual Aircraft Design Parameters Using Gaussian Process Regressions on Historical Data*
- Analyzed existing aircraft to help develop regression-based, sizing tool (*MATLAB)* for novel, sustainable aircraft design

RELEVANT SKILLS

MATLAB | Root Cause| Fault Tree |EVA| FMEA| LabVIEW |AutoCAD| STK |Altium |DAQ |Oscilloscope | Arduino

ACTIVITIES

AIAA, Bioastronautics Project Team Graduate Advisor, MBSE Leadership Lab, UNICEF, Founder of Umich Free Stuff, Sigma Gamma Tau National Aerospace Engineering Honor Society (SGT), Founder of Dearborn High Engineering Club

Notable Leadership: UMich-Dearborn College of Engineering Dean Student Advisory Council (Curriculum, Funding)