

Contact Information:

Professional	Personal
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Education:

Wichita State University	May 2023
Bachelor of Science in Aerospace Engineering	
<ul style="list-style-type: none"> • Cum Laude • Dwayne and Velma Wallace Scholar • Honors Graduate 	

Interpersonal Skills:

Role	Skill
Software Design	Organization, communication, critical thinking, collaboration
Analysis Reporting	Diligence, confidentiality, adaptability
Test Coordination	Multi-Organizational communication, problem-solving, decision making

Technical Skills:

Programming Languages:	Python3, SQL, MATLAB 2014/2019/2023, Visual Basic for Applications, Simulink, NeuralWorks 2001, Batch
Management Software:	Microsoft Office Suite, SAP Concur, Git, Serena Dimensions
Analysis and Design Software:	AutoCAD, Fusion 360, Catia v5/v6, Patran/Nastran, FeMAP, ANSYS 2023R1, GMAT, FATMOPS (LM), FAT (USG), Python (Pandas, NumPy, SciPy, h5py, SqlAlchemy), TDR
Equipment:	Sub/Trans/Super – sonic Wind Tunnel, Epilog Laser Cutter, SLA Printer, CNC, FDM Printer, Water Table, Water Tunnel

Professional Summary:

Highly skilled Systems Engineer with a proven track record in mission systems' flight test planning, execution, and analysis. Adept at Python and MATLAB software design for analysis as well as test design and execution using system requirements as baseline. Known for my ability to intensely focus and adaptability with an aptitude for instruction. I am seeking a position with **{COMPANY}** on the **{PROGRAM}** program in **{LOCATION}** to leverage my skills in system test and analysis to the benefit of **{PROGRAM OBJECTIVE}**.

2024 Summary of Results:

In 2024, I held a significantly greater amount of responsibility compared to 2023. I planned, executed, and analyzed over two missions per month, trained three engineers (#4 in progress), and became the primary contact for Python analysis software development. I dedicated time to training my team, including travel for special training, creating documentation, and enhancing consistency in analysis systems. I managed tool development, analysis efficiency, and tool integration. A passion project of mine (IPAD) gained approval for wider use. I tested three major programs (30R08, 40R01, and 40R02) with five hardware variants across ten software configurations. Summarized by 92 flights with 46 external assets and seven range blocks, amounting to ~\$13.6M in mission costs. I was the sole Fusion IPT executor of the 40R01 Sprint, involving 31 flights over two weeks, reporting critical system performance information in support of a \$700M congressional purchase decision.

Role History

Fusion IPT Systems Engineer (Multiple) Execution, Analysis, Reporting and, Instructor	2023 – Current Lockheed Martin Aeronautics
<ul style="list-style-type: none"> • Utilized system requirements, external/internal contacts, and US Government Test Plans to develop effective test cards to further development of the Fusion and EW subsystems. • Leveraged real-time data telemetry to improve mission quality while providing secure, instructional communication to test conductors, range operators, and test pilots. • Analyzed post-flight data for system anomaly and performance reporting using a variety of available tools. • Maintained and created new analysis software tools using Python. • Served as an instructor to junior engineers, promoting self-sufficiency. • Designed professional documentation for necessary procedures and tools in the form of PowerPoints and web pages hosted on a secure network. 	
Experimental Methods and Research Teaching Assistant Oversight and Experimental Design	2022 – 2023 Wichita State University
<ul style="list-style-type: none"> • Provided hands-on guidance throughout all stages of aerodynamic experimentation, from best manufacturing practices to results analysis. • Guided teams in experimental design, offering expert advice on literature review, test setup, and reporting for a large variety of aerodynamic testing facilities. • Redesigned lab experiments to include intentionally flawed aerodynamic properties, improving the students' troubleshooting and analysis skills. • Developed and delivered training curriculum for operating aerodynamic testing facilities, including sub, trans, and supersonic tunnels and water tables/tunnels. 	

Systems Engineer	2020 – 2020
Preventative Maintenance Engineer	A&M Manufacturing
<ul style="list-style-type: none"> Leveraged current and historic maintenance logs to develop estimated failure timelines to implement new practices. Communicated with maintainers and floor staff on failures in the processes. Persuaded management and maintainers to implement simple changes. Modified existing procedural documentation to reflect practical changes. 	

Projects

JSF 40R01 Flight Test Sprint	2024
Fusion IPT Test Engineer	Lockheed Martin Aeronautics
<ul style="list-style-type: none"> Rapidly designed, executed, analyzed, and reported on all Fusion IPT tests to deliver results to the Continuous Assessment Brief 25 days after delivery of the final 40R01 OFP. Provided the most current system performance to the F35 Program Executive Officer (3-Star General) in direct support of the United States' governmental \$700M purchase decision for over 100 production F35 jets. 	
F35 Fusion Analysis Tool Development	2023 – Current
Lead Developer	Lockheed Martin Aeronautics
<ul style="list-style-type: none"> Utilized PyQt5, Pandas, NumPy, SciPy, SQLAlchemy, amongst other Python packages to develop and maintain a collection of analysis software. Integrated multiple tools together including Fusion Analysis Tool (FAT, USG owned), F35DataManager (USG owned), FATMOPS (LM Owned), and other new software components. Restructured code to include high fidelity documentation, improving readability and maintainability. Leveraged software and UI design principles to both improve the intuition of use and the efficiency of execution. 	
Bronze Propeller – 1st Place	2022 – 2023
Structural Design and Stress Engineering Lead	Wichita State University
<ul style="list-style-type: none"> Produced drafting and analysis tools for structural trade studies using both analytical and numerical methods in MATLAB for all stages of aerospace design. Aggressively reduced weight and design complexity to promote rapid manufacturing and repair through part material analysis. Maintained accurate expense reports for all material and labor costs. Developed and documented structural system requirements and communicated requirements across a multi-disciplinary team. Sourced components from local, national, and international vendors including retired parts. Focused mission design on wildfire prevention and translated intense aerodynamic environments into structural stability. 	

Adaptive Neural Network Modeling and Control Lead Modeling and Data Engineer	2023 Wichita State University
<ul style="list-style-type: none"> • Utilized inverse system control, model reference, and neural model control schemes to train, test, and operate a variety of systems: two-link robotic arm, boat heading control, chemical distillation columns, truck with a trailer reverse control, etc. • Created reinforcement and recurrent learning networks for basic flight control systems. • Produced MATLAB and NeuralWorks 2001 procedures for generating training and testing datasets alongside system analysis tools. 	
Cost and Efficiency Analysis of the Walter-Beech Turning Vanes Project Management and Model Design Lead	2022 Wichita State University
<ul style="list-style-type: none"> • Designed method for non-destructive modification of highly cambered turning vane for the aerodynamic simulation of a quarter pipe. • Maintained expense reports and material contacts for project requirements. • Acted as safety lead during execution to prevent destruction of model and the wind-tunnel itself. 	
Mission Systems Design for CubeSat Assembly Design and Documentation Lead	2021 Wichita State University
<ul style="list-style-type: none"> • Selected sub-assemblies and produced system design based on mission requirements. • Maintained mass property data for assembled system and effects of orbital transfer on fuel states for satellite control. • Communicated mission execution plan and coordinated timelines for transfer between orbits defined by the orbit trajectories of 25 separate debris around Earth. 	