

Harrison Yoder

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SUMMARY

Lead systems engineer and integrator with 11 years of aerospace and defense experience across **tactical aircraft mission systems**, complex development programs, system architecture, requirements analysis, interface management, verification, validation, and technology maturation. Translates operational concepts and performance needs into practical architectures, technical roadmaps, integration strategies, and investment decisions. Leads multidisciplinary **Integrated Product Teams** through trade studies, prototype planning, integration readiness assessments, risk reduction, and customer funded development. Produces technical reports, analyses, CDRLs, proposal inputs, and executive briefings that connect mission needs with cost, schedule, maturity, and verification evidence. Government customer experience supports acquisition activities, technical reviews, funding discussions, and stakeholder decisions. Brings disciplined aerospace judgment to aircraft upgrades, **system wide interfaces**, and new product development programs.

EXPERIENCE

Lead Systems Integration Engineer

July 2022 - Present

Vector Ridge Aerospace

St. Louis, MO

Leads tactical aircraft capability integration, architecture decisions, technology roadmaps, verification planning, interface control, and senior stakeholder communication for complex development efforts.

- Led **tactical aircraft** integration across requirements, architectures, and mission system interfaces.
- Directed **trade studies** comparing maturity, integration, verification, cost, and schedule factors.
- Maintained **technology roadmaps** linking demonstrations, **risk reduction**, investments, and funding decisions.
- Established **verification** strategies connecting requirements with simulation, laboratory, ground, and flight evidence.
- Resolved subsystem compatibility issues through interface control decisions before integration milestones.
- Briefed executives and **government stakeholders** on technical risks, roadmap status, and funding dependencies.

Senior Systems Engineer

June 2019 - June 2022

Summit Mission Systems

Fort Worth, TX

Owned **systems engineering** for tactical aircraft mission system enhancements, coordinating architecture analysis, readiness assessments, customer documentation, proposal inputs, and engineer development.

- Decomposed customer objectives into **functional requirements** and allocations for mission system enhancements.
- Coordinated architecture analyses across sensors, displays, communications, computing, and aircraft services.
- Led maturity assessments and defined prototype activities that closed identified integration gaps.
- Developed **technical reports**, analyses, review packages, and CDRLs for **government customers**.
- Provided estimates, assumptions, risks, and **schedule** dependencies for new capability **proposals**.
- Mentored engineers in requirements quality, interfaces, verification planning, and technical decisions.

Systems Engineer

May 2017 - May 2019

Falcon Crest Technologies

Dayton, OH

Developed airborne electronics requirements and architecture models while supporting trade studies, verification planning, supplier coordination, technical reviews, and leadership reporting.

- Linked stakeholder needs with functional architecture, interfaces, and **verification** methods for airborne electronics.
- Performed **functional decomposition** across hardware and software boundaries for aircraft system designs.
- Planned analysis, simulation, laboratory testing, and demonstrations with requirements traceability.
- Supported **trade studies** by documenting criteria, engineering inputs, and technical rationale.
- Coordinated government and supplier reviews before major system integration events.
- Prepared issue and status briefings that clarified risks, decisions, and milestones.

Associate Systems Engineer

June 2015 - April 2017

Northstar Aerospace Solutions

Huntsville, AL

Supported aerospace requirements, architecture, interface analysis, simulation, verification records, technical reviews, and customer documentation under senior engineering oversight.

- Converted aerospace capability statements into measurable engineering requirements under senior oversight.
- Maintained traceability and **verification** records across specifications, interfaces, and planned test evidence.
- Analyzed data, timing, electrical, and functional dependencies across subsystem interfaces.

- Built simulation artifacts that supplied quantitative inputs for early architecture decisions.
- Prepared review materials and closure evidence for multidisciplinary integration meetings.
- Progressed through requirements analysis, architecture, verification, and customer facing documentation assignments.

PROJECTS

Tactical Aircraft Technology Roadmap 📅 2022

Connected capability needs, technology maturity, prototypes, risk reduction events, investments, and customer funding into an executable roadmap.

Mission System Integration Readiness 📅 2021

Established readiness assessments and verification evidence across interfaces, requirements, laboratory integration, ground testing, and planned flight demonstrations.

LEADERSHIP & AWARDS

- Leadership recognition for guiding tactical aircraft integration decisions across multidisciplinary engineering teams.
- Professional recognition for clear government customer briefings, technical reporting, and program risk communication.

EDUCATION

Bachelor's Degree in Aerospace Engineering

2015

University of Alabama in Huntsville GPA: 4.0

Huntsville, AL

Coursework: Systems engineering, aircraft design, flight dynamics, control systems

CERTIFICATIONS

- INCOSE Certified Systems Engineering Professional 📅 2022
- Systems Engineering Professional Development Recognition 📅 2021

TECHNICAL SKILLS

- **Systems Engineering:** System design, architecture, functional decomposition
- **Requirements Management:** Requirements development, requirements analysis, traceability
- **Verification and Validation:** Verification planning, validation strategy, test evidence
- **Aircraft Integration:** Tactical aircraft, mission systems, platform upgrades
- **Interface Engineering:** Interface control, subsystem interfaces, compatibility analysis
- **Architecture Analysis:** Functional architecture, hardware boundaries, software boundaries
- **Technology Planning:** Technology roadmaps, maturity assessment, prototype planning
- **Program Analysis:** Cost analysis, schedule analysis, integration assessment
- **Technical Documentation:** Technical reports, analyses, CDRLs
- **Acquisition Support:** Government acquisition, proposals, funding support
- **Risk Management:** Risk reduction, technical risks, integration risks
- **Test and Evaluation:** Simulation, laboratory testing, ground testing

SKILLS

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|-------------------------------|------------------------|-------------------------|------------------------|
| • Systems engineering | • Interface management | • Integration readiness | • Proposal development |
| • Systems architecture | • Trade studies | • IPT leadership | • CDRL development |
| • Requirements analysis | • Technology roadmaps | • Government customers | • Executive briefings |
| • Verification and validation | • Technology maturity | • Acquisition support | |

PROFESSIONAL AFFILIATIONS

- INCOSE, Certified Systems Engineering Professional community member.
- Aerospace engineering professional community participant focused on aircraft systems integration and development.

LANGUAGES

- English (Native)
- Spanish (Beginner)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST