

Alexander Raymond

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Results-driven Systems Engineer with expertise in space systems operations, mission engineering, and cross-functional leadership for NASA, DoD, and commercial programs. Proven track record delivering complex technical solutions on time, meeting or exceeding system requirements, and staying on or under budget by optimizing operational efficiency. TS/SCI in adjudication.

Experience

Systems Engineer/Satellite Operator – Orion Space Solutions / Arcfield
– Louisville, CO | Feb 2024 – Present

- Led multiple programs from DoD and NASA from proposal through launch and all milestone reviews.
- Mission System Engineer for SPECTRE EO/IR as a follow-on to the DoD/Space Force RROCI program, with responsibilities of creating technical budgets, requirement decomposition, requirement verification, and return on investment strategies.
- Lead System Engineer for CASIDI, a daytime fast-moving object detector, leading design, requirement V&V, and AI&T.
- System Engineer for ACMES, a NASA ESTO mission demonstrating extreme active heat dissipation on a smallsat, leading requirements V&V, AI&T, and system budgets.
- System Engineer on Tetra 5 & 6, leading procurement and deliverables from subcontractors via action item tracking (milestone-based), artifact tracing and tracking, as well as MBSE.
- System Engineer on DARPA's OUIJI contract for vLeo drag characterization and modeling, leading AI&T, V&V, and compliance.
- Coordinated daily operations of RROCI-2, including spacecraft commanding, telemetry analysis, and data structuring to optimize mission performance. Led anomaly resolution, including first on-orbit ADCS algorithm uplink and verification.
- Developed, led, and delivered training for MARRVN IDIQ, improving onboarding efficiency for new Space Force operations.
- Supported IARPA SINTRA as a Research Technician, contributing to advanced intelligence-gathering initiatives of small near-Earth objects by analyzing outside source CONOPS.

Systems Engineering Technical Supervisor (Encore & Pinnacle Live) – Omni Hotels – Superior, CO | Jun 2022 – Jan 2024

- Led technical teams of up to 35 technical specialists in multiple disciplines to deliver high-profile events and conferences for clients.
- Managed systems coordination, hardware-software interfacing, and real-time operational support with customers in the room.
- Optimized technical workflows by creating standardized configurations and setups to increase efficiency by 35%, including resource alignment and tasking.

Skills

Technical Tools & Languages: Python, Bash, Linux, MacOS, Windows, WSL, Vectorworks (Certified), DOORS, Cameo, Cameo Collaborator, MBSE

Engineering & Operations: 5 years of Systems Engineering Experience, including: Space Systems Operations, Mission Engineering, Systems Integration, Risk Management, Satellite Command & Control, Ground Systems Support, TPM Development, Requirements & Action Items Management, V&V Management, and Execution

Specialized Expertise: Multispectral Earth Observation, EO/IR Payloads, UV Imaging Systems, Ionospheric Sensing, Government-trained Research Fellow

Soft Skills: Cross-functional Leadership, Technical Training, Process Optimization, Client & Stakeholder Management, Eagle Scout

Projects

- **Twin Telescope Tracking of Near-Earth Objects** – Designed and executed a parallax-based tracking system for NEO observation, developed software for a new way of tracking vLeo satellites using visible spectrum. (2022)
- **Postcards from Rosie** – Led multi-year outreach and data visualization initiative for space science engagement to all ages (2022–2024)
- **Bubble Nebula Expansion Study** – Led cross-functional team to measure expansion rates of NGC 7635 (2021)
- **3d Visualization of n-body simulations** – Novel simulation of gravitational effects on bodies (2021)

Education

University of Colorado Boulder, B.A. Astronomy, Minor in Atmospheric & Oceanic Sciences | Aug 2018 - May 2022