

JOSÉ M ARREAGA

 www.JoseBuilds.com  LinkedIn OriginalJose

Summary

System Test Engineer supporting spacecraft testing, mission, platform integration across defense and space programs.

Recognized for improving workflows, reducing rework, supporting cross-functional efforts in missions. Active **SECRET** Clearance.

Hardware Design | Spacecraft Integration | Hardware & Software Integration + Anomaly Resolution | RF Mission Embedded Software Systems | Build & Test Procedures | MBSE | Payload & Launch Operations | Safety Critical Testing

Experience

SYSTEM TEST DEVELOPER III, THE BOEING COMPANY

SPACE & LAUNCH, *SATELLITE TEST PROCEDURE DEVELOPER AND TEST OPERATOR*

Integration & Test. Supported spacecraft system operation activities for Bus, Payload, and Launch.

System Test. Executed subsystem and end-to-end spacecraft Test PROC with focus on requirement.

Technical Integration. Supported operations across HW/SW in the loop and Test Ops environments.

Verification. Verified functionality against test requirements for engineering and safety discrepancies.

Test Planning. Spacecraft execution, readiness activities, anomaly resolution across multiple teams.

Quality. Support quality metrics report on software development procedures and testing systems.

Systems I&T Support. Maintained subsystem and end-to-end requirement verifications & validations.

Software. Applied C#, MATLAB, TCL/Tk, and scripting tools to support Devops and Test workflows.

HARDWARE DESIGN ENGINEER II, THE BOEING COMPANY

EA-18G MISSION SYSTEMS & INTEGRATION, *GROWLER BLOCK II HARDWARE DESIGNER*

Integrations. Supported HW interfaces, RF systems, vehicle level design, and SW dependencies.

Interface Control. Developed Hardware-In-The-Loop for Low/Mid Band carrier envelope integration.

Mission Systems. Supported MBSE based mission activities utilizing Cameo and Jira workflows.

RIO Management. Tracked cost/schedule awareness and integration decisions for mission systems.

Technical Documentation. Joined cross-functional teams to support common play book artifacts.

Quality. Maximizing 106 Reports with technical and management teams. Verify on-time submittals.

MBSE. Created virtual aircraft mission system models to support RF integration concepts and designs.

FLIGHT TEST ENGINEER I, THE BOEING COMPANY

F/A-18 TEST & EVALUATION, *SUPER HORNET BLOCK III FLIGHT TESTER*

Customer Focus. Verified flight plan and aircrew safety on Naval Air Operations Procedure Standards.

Safety. Prepped flight safety card-matrix; examined flight test processes with Navy air crew and team.

Flight Testing. Assisted flight test verifications with flight safety standards and modern operations.

Integration. Secured 100% of flight test archive while implementing SQL best practices in Access DB.

Flight Theory. Fighter jet and aerodynamics studies, soft-skills presentations, and multi-management.

Lab Analysis. Investigate hardware on 1st flight aircraft utilizing academic and enterprise practices.

SENSOR DESIGN ENGINEER, GENERAL ELECTRIC AVIATION

INSTRUMENTATION APPLIED LAB, *TEST SYSTEMS AND HARDWARE DESIGNER*

Engineering Process. Instrumentation, sensor routing, procurement, and hardware for jet engines.

Technical Depth. Collaborated with techs to investigate discrepancies on urgent turbofan engines.

Quality. Enhanced +300 sensor installment and procurement process on SQL coding Access DB.

3D Modeler. Devised virtual model of +600 sensors for hardware instrumentation cross-testing.

EARNED JULY 2021

3.90 / 4.00

M.Sc. AEROSPACE ENGINEER, WASHINGTON UNIVERSITY IN ST. LOUIS

EARNED MAY 2019

3.10 / 4.00

B.Sc. MECHANICAL ENGINEER, UNIVERSITY OF CINCINNATI

Education

U.S. Citizen | L.A. Based

Skills & Competencies

S/C INTERFACES: TVAC, Vibe, Shock, EMI/EMC, ICDs, System V&V, BUS/Payload Test Plans, EGSE/MSGE
SYSTEM PLATFORMS: IBM DOORS, MBSE, SysML, ConOps, Atlassian JIRA, Agile Development, PLM Teamcenter
MODELING/SIM: NX, Simcenter 3D, Nastran, CATIA, Solidworks, Matlab Simulink, Ansys, Cameo-NM, LabVIEW
DATA SYSTEMS: MIL-STD-1553, Ethernet, Spacewire, CAN, RS-422/RS-485, SPI, T&C Comms Systems
LAB EQUIPMENT: Oscilloscopes, Spectrum Analyzers, Network Analyzers, DAQ, Signal Gen, RF Monitoring Tools
SOFTWARE: C#, Typescript, TCL/tk, C++, GIT, Docker, Postman, SQL, REST API, JSON, SQL, Linux, FORTRAN
REGULATIONS: ITAR/EAR, FAA Part 107, UAS/UAV Ops, DO-178C, DO-254, DO-160, MIL-STD-882E, ARP4754A

Certifications

ATTAINED - JAN 2026	BACKEND , API LOGIC, DATA FLOW, VERSION CONTROL, AND DEPLOYMENT FUNDAMENTALS.
CERTIFIED - JULY 2021	FIXED-WING GROUND SCHOOL , PRIVATE PILOT EMBRY-RIDDLE AERONAUTICAL UNIVERSITY.
ATTAINED - JAN 2021	MODEL BASED SYSTEMS ENGINEERING , INTERNAL ASSOCIATE TECH FELLOW LECTURES.
ATTAINED - DEC 2020	RADIO FREQUENCY THEORIES , INTERNAL ASSOCIATE TECH FELLOW LECTURES.
EARNED - MAY 2020	3D MODELING , SOUTHERN ILLINOIS OF EDWARDSVILLE UNIVERSITY.

The lessons learned throughout my career are integrated into my engineering toolkit. The applied lessons are detailed below.

**Continuous Integration | Hands-On Approach | System Thinking | Virtual Twin Engine
Agile Executions | Ownership | Mentorship**

1 Software-in-the-Loop

Embed Technology. Automate spacecraft verification activities, test procedures, and engineering workflows.
Data Tracking. SW tools monitor command execution, correlate telemetry, and identify anomalies root-cause inquiries.
Pipelines. Configured a full stack model with multi-API setup on a MS app to cross-reference contract requirements.
Continuous Integration. Virtual frameworks for test logic, requirements, and supporting repeatable I&T workflows.

2 Hardware-in-the-Loop

System Builder. Integrated unit-level to full-vehicle spacecraft hardware; executed HILT verification tests.
I&T Spacecraft Operations. Monitored RF/telemetry during test ops, isolating anomalies and NCRs.
Harness Integration Lead. Verified spacecraft electrical interfaces, connector mating, and continuity to EGSE.
Hands-On Execution. Assembled flight hardware, routed engine sensors, and performed mechanical tune-ups.

3 System Architecture

Satellite Builds. Managed aerospace lifecycle architecture from requirements flow-down through launch/ops.
Configuration Management. Streamlined baseline workflows, managed Teamcenter data, ICDs, and change orders.
Operational Models. Converted requirements into test strategy, telemetry data configs, and execution procedures.
Virtual Twin Engine. Used SIL/HIL, software simulation, and automated workflows to validate behavior and readiness.

4 Leadership (Most Recent)

	TECHNICAL LEAD , Safety & Quality System Test Organization SATELLITE QUALITY, BOEING EL SEGUNDO
STARTED DEC 25 IN-PERSON	RF Safety. Directed cross-functional initiative, resolving anomalies to meet operational standards. Operation Scaling. Scaled Agile execution across engineering teams, driving test readiness. I&T Impact. Established RF safety/quality standards and automated tools to optimize critical testing. TECHNICAL COORDINATOR , Test Engineering Technical Council SATELLITE NEW SYSTEM, BOEING EL SEGUNDO
STARTED FEB 24 REMOTE	Coordinator. Led CDRs, TRRs, and cross-functional reviews for spacecraft integration and V&V. Data Governance. Controlled Teamcenter records, requirement mapping, TPs, and Test Case metrics. System Impact. Captured lessons learned to optimize test cases, coverage, and execution efficiency. ENGINEERING MENTOR , Entry-Level Engineer SATELLITE QUALITY DIVISION, BOEING EL SEGUNDO
PRESENT IN-PERSON	Talent Development. Advised entry-level engineers to accelerate technical growth and collaboration. Mentorship Impact. Accelerated mentee technical growth, expanding their scope in S/C and quality.