

**PAT RUSSO**  
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**CAREER OBJECTIVE:** Systems Engineer/Project Manager/Software Engineer

### **SUMMARY OF QUALIFICATIONS**

Award winning engineer with 5 years of experience in aerospace. Proven track record of leading complex projects from conception through completion with notable performance. Recognized as a creative problem solver known for delivering significant productivity increases through process improvement and computer automation. Demonstrated superior collaboration, communication, and writing skills working successfully across multiple organizations with people at all levels. Experience in software development.

### **EDUCATION**

Master's Degree, Industrial & Systems Engineering, University of Washington, Seattle, 2016  
Bachelor's Degree, Aerospace Engineering, Rensselaer Polytechnic Institute, Troy, NY, 2012

### **PROFESSIONAL EXPERIENCE**

*Test & Evaluation Engineer*, The Boeing Company, Seattle, WA, 2012 – Present (*promoted*)

#### **Systems Engineering**

- Architected and built multiple structural dynamics test systems for structural mode analysis on test articles from engine components to flight test airplanes; wrote user documents; trained teams on use of specialized test equipment; performed requirements management, verification & validation; executed lab and flight test procedures; automated data system startup sequence to reduce startup time from 15 minutes to 25 seconds.
- Analyzed 415+ test lab design requirements and identified non-compliances. Collaborated with customers to eliminate low value requirements. Facilitated resolution of compliance issues and elimination of low value features avoiding \$300K in rework and waste.
- Built data system software infrastructure to support flight testing. Contributed data and analysis to FAA certification of 3 airplane models. Certification data enabled first airplane deliveries to customers for initial generation of revenue worth ~\$250M/airplane.
- Initiated and led a trade study to down select from (3) external power system design alternatives for an electric power generation lab. Identified and oversaw implementation of a solution that maintained all design requirements while reducing cost by \$24K.

#### **Project Management**

- Served as project manager for 5 capital asset procurement projects and design, build, and test projects of 2 airplane level integration labs. Project budgets ranged from \$120K to \$10M. Responsibilities included: Developing statement of work documents to request bids and get suppliers on contract, collaboration with supplier, customer, and internal technical teams; cost estimating; scheduling; change management; demonstrating performance to plan; earned value reporting; process improvements and creation where none existed.
- Led \$10M, 14 month capital asset procurement project. Managed internal team of 8 and supplier, through design, build, installation, and check out to deliver the compliant asset \$600K under budget.

- Implemented and documented change management process for lab build project. Identified changes to statement of work totaling \$250K+. Secured additional funding to implement changes within budget.
- Automated daily status reporting for lab design project releasing 140+ technical drawings. Reduced status update time from 20 hours/week to 1 hour/week.
- Created a resource-loaded lab design schedule for 10 engineers over 9 months. Identified the need for additional design engineers to complete lab design on time. Obtained approval to hire 5 additional engineers in a reduction environment. Led design team to complete lab design on time, within budget.

### **Software Development**

- Collaborated with users to create dynamics data acquisition software requirements; introduced modern user interface features and documentation techniques to improve user experience, reliability, and code reuse; automated analysis tasks to reduce data reduction time; wrote user manuals and trained users on software operations.
- Streamlined inter process communication for data acquisition software suite by using OMQ to migrate from a “request-reply” messaging pattern to a “publish-subscribe” pattern. Decreased average update rate from once every 200ms to once every 10s.
- Created a data object to import data from legacy, binary data files into Matlab. Enabled customers to create custom data reports and analyze data using the built-on tools of the Matlab environment.

### **TECHNICAL SKILLS**

Applications: Expert user on Microsoft Project, Excel, Word, Power Point, Matlab  
 Programming: C/C++; Bash; Python; FORTRAN; HTML/CSS; Ubuntu/RHEL Linux User;  
 Experience with AWS, Qt, zeromq, make, and github

### **CERTIFICATES + TRAINING**

Global Integrated Systems Engineering, 2015

### **HONORS & AWARDS**

Boeing “Pride in Excellence” Award, 2012, 2013, 2014, 2015, 2016

### **SECURITY CLEARANCE**

U.S. Secret - Active