Kirk W Kittell

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Profile

I am a tool builder. It is better to work out the logic of repetitive tasks and automate yourself out of a job than to be a copy/paster. I operate with a test-driven mentality to design systems. I obsess over interfaces.

I am comfortable working in uncertain, time-critical, mission-critical environments. I am adept at improvisation and leadership under pressure because I take the time upfront to know the system. The best professional feedback I ever received was that I have a skill for discovering the objective in ambiguous situations.

I love leading people. I take pride in seeing teammates achieve their personal goals while achieving team goals, and in making the work procedures they use and the environments they work in simple and sane. Serve the purpose, not the process.

Skills

Certification: Project Management Professional (PMP)

Programming languages: Python, C, XML, PHP, R

Data analysis: sensor integration, data reduction and visualization (VBA, Python), development of data analysis tools, SQL

Systems engineering: requirements analysis, use case development, change management, system/software testing, system modeling

Work

Boeing **2015 – present**

Systems Engineer: F-15; B-52 Radar Mod; AvionX Vehicle Management Systems
Software Integration and Test Lead: AvionX Health Management Systems

Led teams of software engineers to develop software testing and aircraft interface data acquisition solutions. Created work instructions and plans for requirements development and software verification for DO-178C and DO-330 conformance. Collaborated across product lines to develop software verification processes for the AvionX business unit. Instituted agile development practices for multiple software product teams, serving variously as scrum master and product owner.

Administered large requirements database (DOORS) with tens of thousands of requirements and verification cases and trained operators to use the database. Developed workflows to share data among brittle legacy configuration management systems and requirements database. Provided clear, understandable visualization of entire lifecycle of technical changes to support change control boards and program management reviews.

Developed automated reporting and data analysis tools for requirement databases to reduce status measurement time from days to minutes. Worked with stakeholders to improve understanding of verification status for contract reviews.

Work

Esterline **2012 – 2015**

Systems Engineer: Embraer E2 Thrust Control Quadrant (TCQ)

Handled a variety of tasks across the full product life cycle: from working with customers to define stakeholder use cases and system requirements, to developing project plans and processes for certification, to developing prototype hardware and software, to performing functional and environmental qualification testing, to packing development units in a box and shipping them to Embraer.

Developed system and software test solutions for safety-critical (DAL A) embedded real-time systems. Developed data architecture for linking requirements to test procedures to test results. Integrated large amounts of data from multiple sensors and communication buses to validate development units. Organized and led gate reviews with customers and suppliers.

Raytheon **2009 – 2010**

Systems Engineer: Patriot Air Defense System

Created test plans for radar receiver/exciter hardware. Led requirements development for signal processing and communication equipment software.

Science Applications International Corporation (SAIC) **2008 – 2009**

Propulsion Subsystem Engineer: Space Shuttle Program

Performed fault tree analysis, hazard analysis, and failure modes/effects analysis (FMEA) on obsolescence replacements on Space Shuttle Auxiliary Power Unit. Analyzed live flight data on Mission Evaluation Room console during launch and landing of two Space Shuttle missions (STS-124 *Discovery*; STS-126 *Endeavour*).

Orbital Sciences Corporation **2006 – 2008**

Systems Engineer: Orion Launch Abort System; Kinetic Energy Interceptor

Developed requirements specifications for Orion Launch Abort System rocket motors. Performed requirements development, traceability analyses, and launch range safety certification for Kinetic Energy Interceptor.

Education

MBA, Washington University in St. Louis 2019 - (2022)

MS, Aerospace Engineering, University of Illinois 2004 - 2006

BS, Aerospace Engineering, University of Illinois 1999 - 2003

Leadership

INCOSE Midwest Gateway Chapter **2015 – present**

President, Secretary for St. Louis area chapter of the systems engineering professional society INCOSE (International Council on Systems Engineering).

Metro St. Louis Illini Club **2016 – 2019**

Served as interim president to restart the local University of Illinois Alumni Association chapter in St. Louis. Organized events and scholarship programs.