Sujit Shivaprasad

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EDUCATION

UNIVERSITY OF WASHINGTON
Certificate in Engineering Leadership
2020-Present

PURDUE UNIVERSITY
BS Aeronautical and Astronautical Engineering
May 2017

LINKS

LinkedIn: **sujitshivaprasad**
Github: **sujitshivaprasad**

COURSEWORK

Aeromechanics
Thermodynamics
Linear Algebra
Differential Equations
Aerospace Systems Design
Mechanics of Materials
Fluid Mechanics
Structural Analysis
Signals and Systems
Control Systems Analysis
Dynamics and Vibrations
Flight Dynamics
Data Science
System-of-Systems Modeling & Analysis

SKILLS

PROGRAMMING
C • C++ • Python
Ada • Bash • Fortran

TOOLS
MATLAB/Simulink
DOORS • Git
Cameo
Familiar:
Solidworks • CATIA
Abaqus • LS-Dyna

NOTABLE PROJECTS

• Student Aerothermal Spectrometer Satellite of Illinois and Indiana (SASSI2), launched April 2019
• Advancing Diaphragm Modeling Technology for Propellant Management, launched September 2016
• ICESat-2, launched September 2018

EXPERIENCE

MECHANICAL SYSTEMS ANALYSIS ENGINEER Boeing | Environmental Control Systems
June 2019 – Present | Seattle, WA

- Engineering analysis for early development commercial aircraft programs related to environmental control systems, including flammability reduction, air supply and fuel systems.
- Control system and physical modeling for system architecture development in Simulink/Simscape.
- Model-based systems engineering coupled with traditional systems engineering to write robust requirements.
- Safety assessments such as System Functional Hazard Assessments to build reliable products.

CONTROL SYSTEMS ENGINEER Rolls-Royce
July 2017 – May 2019 | Indianapolis, IN

- Systems/Software engineering for aircraft engine control systems meeting DO-178 and ARP-4754 guidelines.
- Solved fleet issues by duplicating engine problems, and proposing software solutions for the Rolls-Royce T56 engine E-2D Advanced Hawkeye application.
- Development through the design cycle, involving root cause analysis, requirements development/validation, software development, system and software verification using HIL and SIL platforms.
- Real-time simulation development for hardware-in-the-loop control system development and verification.

SIMULATION ENGINEERING CO-OP Kinetic Vision
May 2016 – Aug 2016 | Cincinnati, OH

- Finite Element Analysis (FEA) of various consumer products using Abaqus and LS-Dyna operated on Linux servers on High-Performance Computing systems.
- Experience meshing using Altair HyperMesh and CATIA.
- Developed FEA automation tools and algorithms such as meshing and exporting simulation results with Python scripts, utilizing various python packages such as NumPy and SciPy.

RESEARCH

MACHINE-TO-MACHINE LAB | Purdue University
Nov 2015 – May 2016 | West Lafayette, IN

- Under the supervision of Dr. Eric Matson, developed an autonomous drone to analyze chemical plumes in explosions and relayed the information to a ground station using the Pixhawk autopilot.

AIR TRANSPORTATION MANAGEMENT LAB | Purdue University
May 2014 – Dec 2014 | West Lafayette, IN

- Under the supervision of Dr. Dengfeng Sun, conceptualized and designed a flight simulation tool for optimizing traffic flow management using parameters such as aircraft model and ground speed to calculate flight time and fuel burn.