CHRISTOPHER RUSHFORD

SYSTEMS ENGINEERING MASTERS STUDENT

PERSONAL PROFILE

Master of Systems and Electrical Engineering student with experience in heavy manufacturing, an aerospace supply chain internship and 4+ years of project management for collegiate rocketry and cubesat projects. My career objective is to advance human capabilities in space.

SKILLS & TOOLS USED

- Enterprise Resource Planning
- Forecasting
- Root Cause Analysis
- Gantt Charts
- Contract Negotiations
- Spreadsheets
- Visual Studio

NOTABLE PROJECTS

Base 11 Space Challenge

Liquid Rocket Competition

I led my team to win 3rd place with $10k prize money in the Preliminary Design Phase. I pioneered the team's use of the 3DExperience platform, prompting a surprise award of $5k from Dassault Systemes. Coordinated with PSU Risk Management, Environmental Health and Safety, and Regulatory Compliance departments as necessary.

OreSat

OreSat0 and OreSat1

PSAS has two satellites in the Oregon Satellite (OreSat) project. I work with NASA CSLI and the rideshare providers to meet regulatory compliance and other documentation requirements, register the satellites with appropriate entities and perform project planning to meet deadlines.

OreSat2

Next-generation CubeSat

Taking lessons learned from the first two vehicles, my SYSE Masters Project is to develop the OreSat2 vehicle and mission plan. This is a work in progress as of April 2021.

CONTACT INFORMATION

208-819-5997
risto.rushford@gmail.com
https://sites.google.com/pdx.edu/risto-rushford

EDUCATIONAL HISTORY

Portland State University

M.Eng. Systems Engineering - September 2019-Ongoing

Degree project focused on planning the OreSat2 satellite mission. **GPA 3.81**

Related Coursework

- System Dynamics
- SYSE Requirements
- SYSE Management
- SYSE Approach
- Operations Research
- Hardware-Software Integration

Additional Skills and Methods Learned

- Stakeholder Management
- Trade-space Analysis
- SysML
- System Architecting
- Feedback Modeling
- Data Envelopment Analysis

M.S. Signal Processing & Machine Learning

September 2020 - Ongoing. **GPA 3.69**

Related Coursework

- Random Processes
- Math. Foundations of Mach. Learning

Additional Skills and Methods Learned

- Spectral Clustering
- Nearest-Subspace Classifier
- Matched Filters
- Robust PCA
- Low-Rank Matrix Completion
- Kernel Ridge Regression

Graduate Certificates

Computer Modeling and Simulation - Completed

- Agent-Based Simulation
- Modeling & Simulation w R and Python

Computational Intelligence

- Data Mining w Info Theory
- Discrete Multivariate Modeling

B.S. Global Supply Chain Management

September 2016 - June 2019. **GPA 3.69**

Related Coursework

- Operations Management
- Forecasting with R
- Supply Chain Analysis
- Production Planning & Control
- Lean Six Sigma
- Global Transportation & Logistics

INDUSTRY EXPERIENCE

Portland State Aerospace Society (PSAS) - Portland, OR

Project Management Research Assistant - September 2016 - June 2019

Manage technical and administrative project management activities including team coordination, budgeting, scheduling and logistics planning. Planned and executed grant writing / other fundraising efforts raising $200,000+.

Aurora Flight Sciences - Manassas, VA

Supply Chain Management Intern - June 2019 - August 2019

Assist buyers in tracking purchase orders. Attended continuous improvement meetings and led a kaizen initiative to improve receiving operations.

Gunderson Marine - Portland, OR

Fitter / Welder - April 2014 - April 2014

Worked start to finish on fitting/welding activities for two New Panamax articulated oil barges and performed final checks for Quality Assurance.

PROGRAMMING LANGUAGES

- Julia
- Python
- R
- MATLAB

SOFTWARE

- SAP ERP
- Microsoft Project
- Microsoft Office Suite
- ANSYS Mechanical Workbench
- Dassault Systemes 3DExperience
- a.i. solutions FreeFlyer