

Joseph Krueger

Jkruege4@villanova.edu | JosephKrueger.org | (717) 309-6104 | www.linkedin.com/in/joseph-krueger

EDUCATION

Villanova University, Villanova, PA

May 2021

Bachelor of Science in Mechanical Engineering | Minors: Aerospace Engineering and Mathematics

3.6 GPA | 3.67 Tech GPA | Dean's List

ENGINEERING EXPERIENCE

NASA RASC-AL Team Finalist

2021

- Led sub-team to design prototype Mars Assent Vehicle chassis and structural components
- Selected as one of 16 national finalist teams, and presented findings at yearly RASC-AL Forum

Capstone Project, Villanova Mechanical Engineering and Lockheed Martin Space

2020-Present

- Researched and modeled rocket fuselage part for metallic additive manufacturing
- Developed printing and assessment procedures for testing of finished component in spring 2021

Teaching Assistant, Villanova Mechanical Engineering Department, Villanova PA

2020-Present

- Graded freshman level Matlab coursework
- Held regular office hours to instruct and correct students outside of class

Junior Project Manager, Villanova Facilities, Villanova, PA

2018-2020

- Performed complete survey of 128 classrooms on campus
- Conducted preliminary inspections of new campus housing for ADA compliancy

RESEARCH/AWARDS

UPenn REACT Award, University of Pennsylvania

Summer 2020

- Selected for international materials research at the GIANT campus in Grenoble, France
- Focused on active coating technologies with respect to water resource management
- Unable to attend due to COVID-19

Researcher, Villanova Center for Research and Fellowships, Villanova PA

2019-Present

- Proposed and conducted faculty advised research on the effects of fragmentation on brittle materials
- Wrote and utilized computer simulations in Matlab to collect and compile data
- Summarized data set and presented findings at the Villanova Summer Research Symposium

Research Assistant, Villanova College of Mechanical Engineering

2020-2021

- Fabricated robot chassis, actuator, and wheel components using traditional and additive manufacturing techniques
- Networked LIDAR, Raspberry Pi, and Arduino into an autonomous system

LEADERSHIP/ACTIVITIES

President, Villanova Chamber Strings

2019-Present

- Organized, planned, and performed in concerts and events on Villanova's Campus

Co-Chair, Villanova SWE Professional Development Committee

2020-Present

- Worked with a small team to direct career building events such as an annual networking dinner

Executive Board Member, Villanova Pops Orchestra

2017-2019

- Supported director in the operations of orchestra and its performances

Volunteer, Villanova Engineering is for Girls Day

2019

- Lead activities to introduce grade school girls to engineering

SKILLS

Experience with Matlab, Python, SLURM, Autodesk Inventor, Solidworks, Creo, HTML, Solid Edge, and CSS
Proficiency with Microsoft Office and general online databases