

# 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

3.58 GPA | 3.66 Tech GPA | Dean's List

## ENGINEERING EXPERIENCE

### **Research Assistant**, Villanova College of Mechanical Engineering

2020-Present

- Designed, built, and tested medical assistance robot on contract by outside company
- Fabricated robot chassis, actuator, and wheel components using traditional and additive manufacturing techniques
- Networked LIDAR, Raspberry Pi, and Arduino into an autonomous system

### **Capstone Project**, Villanova Mechanical Engineering and Lockheed Martin Space

2020-Present

- Researched and modeled rocket fuselage part for metallic additive manufacturing
- Coordinated with Lockheed Martin representatives to refine and improve solution
- Developed printing and assessment procedures for testing of finished component in spring 2021

### **Researcher**, Villanova Center for Research and Fellowships, Villanova PA

Summer 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

### **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 ongoing survey of 128 classrooms on campus
- Conducted preliminary inspections of new campus housing for ADA compliancy
- Reviewed engineering drawings and created formal reports

### **Intern**, Coupling Corporation of America, Jacobus, PA

Summer 2016, 2017, 2018

- Designed apparatus for use in manufacturing; attended corporate meetings for engineering and sales
- Researched, contacted companies, and made purchases and deliveries for company needs
- Assembled several industrial couplings for variety of companies such as NASA and Boeing

## 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

2019-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

### **Team Captain**, Northeastern Robotics Team

2014-2017

- Won third place overall in regional Vex robotics competition and first place in two events

## SKILLS

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