**Education : Bachelor of Science, Mechanical Engineering GPA 3.98/4.0 Aug 2017 – May 2021**

**Rose-Hulman Institute of Technology**, Terre Haute, IN 47803

* Minors: Computer science, Aerospace engineering
* Courses: Thermodynamics, Fluids, Propulsion, Statics, Materials, Dynamics,

Programming, Data structures, Computer architecture

* Leadership/involvement: Grand prix engineering (GPE), Maker lab, Design Build Fly (DBF),

Chorus, Chamber, Acappella (president), Tau Beta Pi

**Experience : REU at Virginia Tech**, Blacksburg, VA 24061 **June 2019 – Aug 2019**

**Researcher** – 40 hr / week

* Research Experience for Undergraduates (REU) in Automotive Engineering
* Accessibility constraint mapping for on-road, off-road, indoor autonomous transit/delivery
* Investigated and classified navigation constraints and barriers for autonomous vehicles
* Utilized Robotic Operating System (ROS) and computer vision (OpenCV) software to identify

and localize barriers/constraints in a 3D global mapping framework

* Integrated with existing Simultaneous Localization and Mapping (SLAM) and convolutional

neural networks (CNNs) software for robotic navigation

**Metronet Inc.**,3701 Communications Way, Evansville, IN 47715 **June 2018 – Aug 2018**

**Design Intern** – 40 hr / week

* Updated and maintained company as-built fiber designs utilizing GIS software
* Revised and performed quality control on over 100 outsourced fiber network designs
* Generated 10 fiber network construction drawings and bills of materials for new markets
* Compiled and documented a 50-page procedure manual

**Projects :** **Java – Software development Sept 2018**

* Utilized software engineering principles to design a computer application
* Implemented Java classes utilizing UML, polymorphism, interfaces, Java-swing GUI

**Python – Robotics Feb 2018**

* Implemented Python classes for remote robot functionality
* Leveraged Python graphics and shell scripting for robotic control and navigation

**Skills : Computer skills**

* Python, Java, C, C++
* Matlab, Simulink, Maple
* Solidworks, AutoCAD, Inventor
* MIPS assembly, Verilog, Xilinx
* Geographical information systems (3-GIS)
* Linux, Ubuntu, Windows, Shell scripting and automation, Git
* Computer vision (OpenCV), Convolutional neural networks (Keras, TensorFlow)
* Robotic Operating System (ROS), Simultaneous Localization and Mapping (SLAM)

**Other skills/interests**

* Gas metal arc welding (GMARC)
* Shop equipment (mills, lathes, saws, CNC, etc.)
* Computational fluid dynamics (CFD), Finite element analysis (FEA)