

# Brian Knapp

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## 🎓 Education

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**Vanderbilt University**, *Bachelor of Science in Mechanical Engineering* 05.2022  
GPA: 3.77 | Dean's List Nashville, TN  
Relevant Coursework: Aerospace Propulsion, Flight Physics, Gas Dynamics, CFD

## 📁 Professional Experience

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**Mechanical R&D Intern**, *Material Handling Systems* 05.2021 – 08.2021  
Mt. Washington, KY

- Created, edited, and detailed installation drawings for project sites
- Established reference for implementation of transfer plates in bolt-up conveyor lines
- Implemented quality control for robotic parcel singulator by analyzing raw data

**Mechanical Design Intern**, *Material Handling Systems* 05.2020 – 08.2020  
Mt. Washington, KY

- Created and detailed installation drawings for project sites
- Personally accounted for 20% of all installation drawings
- Designed original 3D models for conveyor lines

**Mechanical Engineering Intern**, *Material Handling Systems* 06.2019 – 08.2019  
Mt. Washington, KY

- Reconciled issues with task managing web application
- Performed audits, troubleshooting, and improvements to said web application
- Generated reports and coordinated with managers to realign BOM release schedule

## 📁 Activities

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**Vanderbilt Aerospace Design Laboratory**, *Avionics Engineer* 05.2021 – Present  
Nashville, TN

- Selected for Vanderbilt's prestigious aerospace design team and research laboratory
- Designed, machined, and fabricated novel launch vehicle systems for competition
- Devised the electronic components associated with rocket orientation

**Vanderbilt Robotics**, *Mechanical Team - Excavation* 09.2019 – 01.2020  
Nashville, TN

- Designed excavation system for lunar mining robot
- Used CAD for bucket scoop arm design and system interface
- Prototyped first iteration design with machining and rapid prototyping techniques

**Vanderbilt University Motorsports**, *Chassis and Suspension* 09.2018 – 03.2019  
Nashville, TN

- Assisted in devising suspension components using CAD software
- Learned and practiced machining techniques to fabricate vehicle components

## 🧠 Technical Skills

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### Computer Aided Design

Creo Parametric, Autodesk Inventor, OnShape

### Languages

MATLAB, Arduino, LabVIEW, Java

### Manufacturing

3D Printing, Mills, Bandsaws, Grinders, Shears, Metal Breaks, Presses