

Robert Hoel

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Portfolio: <https://www.robertdhoel.com>

Education

University of Central Florida, Orlando FL, Mechanical Engineering B.S

Expected Graduation date Aug-27

Work Experience

Design Engineering Intern | JBT-Marel

September 2025 – Present day

- Design, Draft, and Modify, multiple parts for various pieces of company equipment using Autodesk Inventor and Autodesk Vault Pro / Basic
- Creating large scale drawing trees within Excell to organize large projects in a more manageable space. This included using features within Excel to directly link documents from OneDrive for ease of checking and approving for over 700 drawings
- Collaborate with several internal departments such as: Industrial Manufacturing, Marketing, and Purchasing to deliver quality products
- Research and apply 3D printing techniques to create high tolerance parts for rapid R&D and Display pieces for large expos. This includes calibrating filament profiles for a variety of materials, along with several nozzle sizes and brands
- Participate and Lead technical review meetings to review general project timelines and action items to move the project forward

Seasonal Educator / Exhibit Educator | Zoo Miami

June 2021 – August 2024

- Led firsthand educational activities and interactive wildlife presentations including on the spot notice and getting creative with resources
- Creating on hand schedules for campers day to day life, coordinating with many third parties to delivery a unforgettable experience

Resident Assistant | UCF Housing and Residence life

August 2024 – May 2025

- Planned community events and that promoted engagement, well-being, and smooth transition to university life
- Mentored and supported by over fifty residents, offering personalized 1 to 1 meetings, creating a positive living, and learning environment

Projects

Sol Survivor | STEEL RV Design Project

Team Lead / Project Manager

- Guided several new engineering students in core engineering practices, which include: teaching 3D modeling by hosting technical design reviews, guiding material selection, and aiding hardware selection through professional experience
- Developed a cohesive storyline and theme that will be portrayed by elements in our vehicle design using programs such as SolidWorks, Blender, and Fusion 360
- Developed a design optimizing manufacturability and rapid testing using SolidWorks / Fusion 360 for eventual 3D printing
- Designed a unique lighting element utilizing PMMA optic wire and LED bulbs to create a unique fiery mane effect for our horses

Expo Set Piece Display | JBT Marel

Project Owner

- Scaled, Simplified, and modeled large scale equipment to a fraction of their size using an custom Excel tool to calculate accurate scaled measurements, track files with drawing trees, and to create a time effective print schedule to deliver our project on time
- Tested several additive manufacturing methods adjusting key settings to gain time efficient 3D print's that will hold to excellent show quality
- Setting up design review and concept meetings with upper management to brainstorm and provide updates on project timeline

Drop tower brake system analysis First Place Winner

Lead Electrical and Design Engineer

- Researched brake systems in drop towers using key principles from Statics and Dynamics classes
- Created detailed sketches and free-body diagrams to model structural forces and system behaviors
- Engineered a dual motor circuit to drive rapid motion of our cart, and to power a custom solenoid braking system

Technical Skills & Knowledge

Computer Aided Design: Inventor, Autodesk products, SolidWorks

Coding: C, Java, Python, Power Automate, MATLAB

Office Programs: Word, Excel, PowerPoint, Sheets, Docs, Slides,

Power BI, Power automate

3D Printing Manufacturing: SLA and FDM Printing

Technical and manufacturing drawings: GD&T practice

Rudimentary Knowledge of Z-Brush and Blender

Creative Artistry skills from simple sketches to multipoint perspective pieces

Certifications

SolidWorks Design Associates

SolidWorks Design Professionals

Fusion 360

Society of Themed Entertainment Engineers and Leaders (STEEL) | Treasurer

Themed Entertainment Association (TEA) | General Member

International Association of Amusement Parks and Attractions (IAAPA) | General Member

Affiliations