

# NAVIN BHATTARAI

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## EDUCATION

<b>Washington University in St. Louis, MO</b>	GPA: 4.0/4.0	Aug 2025 - Present Expected Graduation May 2027
<ul style="list-style-type: none"><li>Bachelor of Science, <b>Mechanical Engineering</b></li><li>Honors: <i>Lee Hunter Scholarship</i></li><li>Relevant Coursework: Design of Thermal Systems, Heat Transfer, Fluid Mechanics, Control Systems, Solid Mechanics, Thermodynamics, Materials Science, Machine Elements, Manufacturing Processes, CAD</li></ul>	GPA: 4.0/4.0	Aug 2022 - May 2025 Degree Conferral May 2026

**Certifications:** Certified SOLIDWORKS Associate (2025), Advanced AutoCAD (2D/3D), OnShape Parametric CAD

## SKILLS

**Design & Manufacturing:** SOLIDWORKS (DFM/DFA), Finite Element Analysis(FEA), OpenFoam, ParaView, On-Shape, AutoCAD, Machining, 3D Printing (FDM), Soldering

**Programming & Analysis:** Python, C++, MATLAB, LaTeX, R, Mathematica

## EXPERIENCE

<b>Design-Build-Fly, Structures Sub-Team   Structures Engineer</b>	Aug 2025 – Present
Washington University in St. Louis, MO	
<ul style="list-style-type: none"><li>Design and model aircraft structural components and sub-assemblies using SOLIDWORKS</li><li>Optimize structures to ensure CAD models are manufacturing-ready, simplifying fabrication and assembly</li><li>Collaborate with aero &amp; propulsion sub-team to ensure structural integrity meets performance specs</li></ul>	
<b>McKelvey School of Engineering   Undergraduate Course Assistant</b>	Aug 2025 – Present
Washington University in St. Louis, MO	
<ul style="list-style-type: none"><li>Support 150+ students through weekly office hours and help sessions in Statics and Mechanics of Materials &amp; Solid Mechanics, strengthening core structural analysis skills</li><li>Provide constructive feedback, helping students improve problem-solving approaches</li></ul>	
<b>Dye-Sensitized Solar Cells (DSSCs)   Research Associate</b>	Feb 2024 – Aug 2025
Truman State University, Kirksville, MO	
<ul style="list-style-type: none"><li>Fabricated and tested 30+ solar cell prototype assemblies; conducted performance benchmarking</li><li>Developed a repeatable assembly process improving results and consistency across multiple prototypes</li><li>Presented experimental findings at 2025 APS Prairie demonstrating natural dyes as eco-friendly alternatives</li></ul>	
<b>Student Union and Involvement Services   Building Operations Manager</b>	Aug 2022 – Aug 2025
Truman State University, Kirksville, MO	
<ul style="list-style-type: none"><li>Coordinated 100+ events for 45+ organizations, handling equipment setup, security, and emergency response</li><li>Trained and supervised 6+ assistants while enforcing safety protocols and operational standards</li></ul>	

## PROJECTS

<b>Mechanical Pencil Assembly &amp; Mechanism Design   SOLIDWORKS, Technical Drawing, DFM</b>
<ul style="list-style-type: none"><li>Modeled a 10-part assembly including internal spring-loaded lead advancement mechanisms</li><li>Generated a professional documentation package: Exploded views, cross-sections, and Bill of Materials(BOM)</li></ul>
<b>SnackUp: DFM/A-Optimized 3D Prototyping   SOLIDWORKS, DFM, 3D Printing</b>
<ul style="list-style-type: none"><li>Designed a modular storage system specifically optimized for injection molding using draft angles and constant wall thicknesses.</li><li>Validated snap-fit clip geometry through tolerance stack-up analysis and functional 3D printed prototypes.</li></ul>