

NAVIN BHATTARAI

☎ (660)280-5163 ✉ b.navin@wustl.edu [linkedin.com/in/navin-bh](https://www.linkedin.com/in/navin-bh) [github.io/navin-pro/](https://github.com/navinbh09)

EDUCATION

Washington University in St. Louis, MO GPA: 4.0/4.0 Aug 2025 - Present
• Bachelor of Science, **Mechanical Engineering** Expected Graduation May 2027

- Honors: *Lee Hunter Scholarship*
- Relevant Coursework: Design of Thermal Systems, Heat Transfer, Fluid Mechanics, Control Systems, Solid Mechanics, Thermodynamics, Materials Science, Machine Elements, Manufacturing Processes, CAD

Truman State University, Kirksville, MO GPA: 4.0/4.0 Aug 2022 - May 2025
• Bachelor of Arts, **Physics** Degree Conferral May 2026

- Honors: *Sigma Pi Sigma, International President's Honorary Scholarship, 7+ Merit-Based Scholarships*
- Relevant Coursework: Modern Physics w/lab, Vibrations and Waves, Classical Mechanics, Advanced Physics Lab, Mathematical Methods in Physics, ODEs, General Chemistry

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

Design-Build-Fly, Structures Sub-Team | *Structures Engineer* Aug 2025 – Present
Washington University in St. Louis, MO

- Design and model aircraft structural components and sub-assemblies using SOLIDWORKS
- Optimize structures to ensure CAD models are manufacturing-ready, simplifying fabrication and assembly
- Collaborate with aero & propulsion sub-team to ensure structural integrity meets performance specs

McKelvey School of Engineering | *Undergraduate Course Assistant* Aug 2025 – Present
Washington University in St. Louis, MO

- Support 150+ students through weekly office hours and help sessions in Statics and Mechanics of Materials & Solid Mechanics, strengthening core structural analysis skills
- Provide constructive feedback, helping students improve problem-solving approaches

Dye-Sensitized Solar Cells (DSSCs) | *Research Associate* Feb 2024 – Aug 2025
Truman State University, Kirksville, MO

- Fabricated and tested 30+ solar cell prototype assemblies; conducted performance benchmarking
- Developed a repeatable assembly process improving results and consistency across multiple prototypes
- Presented experimental findings at 2025 APS Prairie demonstrating natural dyes as eco-friendly alternatives

Student Union and Involvement Services | *Building Operations Manager* Aug 2022 – Aug 2025
Truman State University, Kirksville, MO

- Coordinated 100+ events for 45+ organizations, handling equipment setup, security, and emergency response
- Trained and supervised 6+ assistants while enforcing safety protocols and operational standards

PROJECTS

Mechanical Pencil Assembly & Mechanism Design | *SOLIDWORKS, Technical Drawing, DFM*

- Modeled a 10-part assembly including internal spring-loaded lead advancement mechanisms
- Generated a professional documentation package: Exploded views, cross-sections, and Bill of Materials(BOM)

SnackUp: DFM/A-Optimized 3D Prototyping | *SOLIDWORKS, DFM, 3D Printing*

- Designed a modular storage system specifically optimized for injection molding using draft angles and constant wall thicknesses.
- Validated snap-fit clip geometry through tolerance stack-up analysis and functional 3D printed prototypes.