

SATISH PATEL

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EDUCATION

Purdue University

Bachelor of Science in Mechanical Engineering

Minor: Materials Science Engineering

Dean's List and Semester Honors

May 2027

GPA: 3.8/4.0

WORK EXPERIENCE

Purdue STARS Internship (Summer Training, Awareness, and Readiness for Semiconductors) May 2024 - July 2024

- Designed and manufactured single-layer, double-layer, and multi-layer PCBs using Altium Designer as part of Advanced Packaging track
- Optimized laser cutter parameters to ensure precise etching of copper layers while preserving FR4 substrate
- Applied conformal coating on PCBs using UV resin
- Conducted cross hatch tests and pull tests to ensure UV resin had strong adhesion to PCB board
- Validated electrical connections using optical microscopy and 4-probe electrical measurements

Northrop Grumman HIP Intern

Oct 2021 - June 2022

- Collaborated with engineers to learn about real-world projects, gaining hands-on experience in aerospace and defense
- Acquired valuable exposure and understanding of company's use of semiconductors in defense and space

RESEARCH EXPERIENCE

Energy and Transport Sciences Lab - EV Battery Research Analyst

Aug 2024 - Present

- Collaborating with graduate students to model thermal runaway propagation (TRP) in EV batteries
- Developing app to allow researchers and industry collaborators to analyze TRP patterns within battery cells
- Analyzing simulation results with graduate researchers to improve battery safety designs and implement effective strategies for mitigating TRP in next-generation EV batteries

PROJECTS

ASME Rainergy Solutions - Design Lead

Aug 2024 - Present

- Leading turbine team of 12 in design and fabrication of a high-performance water turbine for rainwater purification
- Designing hydroelectric generator to efficiently harness rainwater's potential energy to power filtration process
- Coordinating with structures subteam to integrate turbine components for energy generation and water purification

Engineering Projects in Community Service (EPICS) - Design Lead

Aug 2023 - May 2024

- Led team of 8 in development of an innovative and child-friendly playground wall for toddlers
- Managed 16-week project timeline, strategically scheduling semiweekly meetings to advance design milestones
- Translated CAD-based design concepts into practical prototypes, showcasing hands-on approach to design realization

ASME PowerPath Team

Jan 2024 - May 2024

- Spearheaded CAD engineering efforts to implement renewable energy solutions using piezoelectric tiles
- Modeled over 100 designs in Fusion to optimize integration of tiles and enhance renewable energy capabilities
- Laser cut and tested 3 cantilever beam designs, to select most efficient prototype for energy harvesting

SKILLS

Software: Altium Designer, Python, NX, MATLAB, Fusion, AutoCAD, Word, Excel, PowerPoint

AWARDS

Ford Salute Scholarship Recipient

Apr 2023

Eagle Scout

Oct 2020