Shivam Patel

916-465-0022 | shivam.pate1@github.io | linkedin.com/in/shivam-pate1 | patel.shivam.h@gmail.com

WORK EXPERIENCE

HEWLETT-PACKARD ENTERPRISE Roseville, CA
Mechanical Design Engineering Intern May 2022 – Aug 2022

- Developed the mechanical design for a component used as a backdraft prevention for networking switches, increasing worst case cooling capacity by 50%, while only impacting normal operation by 6%
- Designed and tested system-level prototypes to measure airflow efficiency, exceeding airflow targets by 20%
- Collaborated with vendors to design part for injection molding
- Recognized by HPE and Aruba CEO's for having the Best In Class Project out of 52 intern projects

GLUMAC COMBUSTION DIAGNOSTICS LAB Champaign, IL
Undergraduate Research Assistant Sep 2021 – May 2022

- Performed combustion test on transition metals to obtain particle size distribution and shape at various distances from blast origin
- Redesigned laser setup to image moving particles down to 400 microns
- Developed lathe skills by machining plastic parts to be used in blast tests

CO-CURRICULARS

FORMULA ELECTRIC SAE Champaign, IL
Drivetrain Team Aug 2021 – Present

- Performed finite element analysis (FEA) simulations on drivetrain components to optimize design and reduce weight
- Responsible for vehicle wheel hub assembly, helping the team achieve 1st place at the competition

ECO-ILLINI Champaign, IL
Engine Team Aug 2020 – May 2021

- Designed part using CAD to mitigate the effects of vibrational forces on components within the vehicle, improved stability within the vehicle by over 50%
- Redesigned inefficient fuel line with a design that removed unnecessary outlets and pressure gauges, allowing for optimized fuel flow

VEX ROBOTICS Sacramento, CA
Team Captain Aug 2018 – May 2020

- Led a team of 8 in design, planning, and implementation of a robot tasked to lift and stack blocks
- Managed the production of the robot, decreased total build time by roughly 20% from the year before
- Designed the 4 bar linkage arm which was successful at completing the test at all competitions

PROJECTS

SELF-LEVELING BIKE CUP HOLDER - Class Project Dec 2020

- Designed and optimized a gimbal bike cup holder for mass production through injection molding. Our team outlined sourcing, manufacturing, and distribution plans to bring the design to market

EDUCATION

University of Illinois Urbana Champaign Champaign, IL
Bachelor of Engineering May 2024
Major in Mechanical Engineering; **Minor** in Computer Engineering
GPA: 3.90/4.0; Dean's List 2020-2022
Relevant Coursework: Statics, Dynamics, Solid Mechanics, Computer-Aided Design, Design for Manufacturing Analysis, Electrical and Electronic Circuits, Thermodynamics

ADDITIONAL SKILLS

CAD Software/Computer Languages: Fusion 360, Creo, Solidworks, Apriori, AutoCAD, Python, MATLAB
Technical: Microsoft Office, GD&T, Design for Manufacturing (DFM), Design for Assembly (DFA)
Prototyping: 3D Printing, Lathe, CNC Mill, Soldering, Laser Cutting