Shivam Gupta

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EDUCATION

University of California, Davis Expected June 2020
Bachelor of Science in Mechanical Engineering
Relevant Coursework: Mechanical Design, Fluid Dynamics, Thermodynamics, Heat Transfer, Mechanics of Materials, Programming Applications, Engineering Graphics, Control Systems

SKILLS

Softwares: SolidWorks, Autodesk Fusion 360, AutoCad, Google Cloud Platform, IBM Cloud
Programming: Matlab, Python, Numpy, C, Pandas

EXPERIENCE

Manufacturing and Sustainable Technologies Laboratory, UC Davis Sep 2017 - June 2019
Undergraduate Researcher, Davis, CA

- *Digitization of Process Parameters in Manual Grinding.* Poster session presented at annual Undergraduate Research Conference, at UC Davis.
- Extracted acceleration data at 500Hz from a hand-held power tool using wireless embedded sensors, and extrapolated the feed-rate, wrist orientation and position of the tool.
- Fabricated three different Airfoil samples from 3D models by designing a modular vice to hold the stock in a vertical 3-axis milling machine and using G-code created with Fusion 360.

American Society of Mechanical Engineers (ASME), UC Davis July 2018 - Current
Student Chapter President , Davis, CA

- Lead a team of 10 officers with of budget of 10000 Dollars annualy planning social events, industry tours, hands on projects and officer recruitment.
- Lead a workshop that taught 20 students how to design a solar powered bike light that included teaching design of basic circuits, soldering equipment and 3D printing a container that can attached to bike handle bars.

Event Manager, Davis, CA Jan 2018 - Jun 2018

- Planned the annual inter collegiate WalkonWater Competition between 8 ASME student chapters in Northern California while working with the Sacramento-Sierra Nevada Section of ASME.
- Planned and coordinated professional development events, including workshops and information sessions with representatives from various top engineering companies.

PROJECTS

Bike Project, Davis, CA April 2019 - June 2019

- Reverse engineering a bicycle using principles of mechanical design. Finding critical components under three different loading conditions. Analysing critical components to find their safety factors, materials and estimated cost. Used this analysis to suggest design modifications and create a maintenance schedule to extend product life.

Moments (https://github.com/shivinabox/Moments), Davis, CA Sep 2018 - Dec 2018
C programming language, Microsoft Visual Studio 2017

- Developed and tested a program with 100 % accuracy to find the X,Y coordinates of centroid, bending moment of inertia about X,Y planes for complex shapes and bending moment from a user inputted force using Parallel axis theorem.

Gyroscope, Davis, CA July 2018 - Sep 2018
3-axis CNC Mill, Lathe, Drill Press, Geometric Dimension and Tolerances, Fusion 360

- Manufactured and assembled a string operated Gyroscope which included a frame, rotor and spindle and averaged 5 minutes of spinning for every string pull using multiple machining centers and mechanical drawings.

Quadcopter, Davis, CA Sep 2016 - Dec 2016

- Worked in a team of four to design a direct current brush motor and assemble it with a 3D model of a Quadcopter using SolidWorks.