

Siddharth Jhawar

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EDUCATION

The Pennsylvania State University, University Park, PA August **2021**
Master of Science in Engineering Design GPA: 3.9/4

Shiv Nadar University, India May **2019**
Bachelor of Technology in Mechanical Engineering — Minor in Design CGPA: 8.18/10

WORK EXPERIENCE AND PROJECTS

Graduate Research Assistant Oct **2019** - Aug **2021**
The Pennsylvania State University University Park, PA

- Engaged with leading design research groups working on human cognition and mechanism theory at Penn State.
- Identified research gaps in existing work to conceptualize methods for making novel mechanisms with extensive material and space saving capabilities using mechanisms theory and CAD.
- Designed experiment methodology and assisted in verification of a framework that quantifies creativity into 4 parametric research factors.

Improving the Efficiency of OTEC Cycle - Team Research Project May **2018** - May **2019**
Shiv Nadar University Greater Noida, India

- Designed and optimized new types of heliostats used in Ocean Thermal Energy Conversion cycle to forward a sustainable mode of power generation using advanced FEA.
- The newly created system exhibited an increase of more than 50% in the process efficiency.
- Amalgamated 3R principles in the design process to increase the system's overall sustainability.

Sahara - Independent University-funded Research Project Aug **2017** - Apr **2018**
Shiv Nadar University Greater Noida, India

- Designed and fabricated an assistive chair for knee arthritis patients and people with disabilities.
- Organized qualitative data collection surveys in 6 hospitals and rehabilitation centers and analyzed survey inputs to understand key design requirements.
- Collaborated with orthopedic specialists and conducted market survey of existing solutions to deliver a novel device with key economic constraints in consideration.

Summer Trainee May **2017** - July **2017**
Volvo Eicher Commercial Vehicles Limited Pithampur, India

- Interned in the Business Development team at Volvo Production System Wing at VECV.
- Identified production gaps and bottleneck areas in the rear-axle assembly line for Heavy Vehicles. Critically analyzed workflow and helped in identification of approximately 4 hours worth of assembly time losses in a shift.

SKILL SET

Design and Prototyping: Compliant Mechanism Design, Sketching and Visualization, Rendering, Rapid Prototyping, Fabrication Techniques, CAD & Modeling, DFMEA

User Research: User Identification and Personas, Design Ethnography, Contextual Inquiry, Interviewing, Surveying, Stakeholder Analysis, Content Analysis, Feedback Analysis, Usability Testing

Software Tools: Solidworks, Blender, Ansys, Adobe CC (Illustrator, Photoshop, InDesign, XD), NVivo, SPSS

Programming: R, Python, Arduino

Languages: Hindi (*Native*), English (*Fluent*), German (*Beginner*)

LEADERSHIP AND AWARDS

Best Presentation Award, CERS May **2021**
Won Best Presentation Award in the 'Simulation & Mechanism' Section of the 18th Annual College of Engineering Research Symposium held at Penn State.

Associate Secretary, Robotics Club Nov **2017** - Nov **2018**
Co-led and managed the Robotics Club comprising 40 robotics enthusiasts at Shiv Nadar University.