Sanjeev Lamichhane

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Education

Tribhuvan University,IOE,Pulchowk Campus Lalitpur, Nepal
Bachelor in Mechanical Engineering (75.44%) 2019 - 2024

- **Elective-I:** Operation Research/Management Science
- **Elective-II:** System Design And Simulation
- **Elective-III:** Advanced Mechanical Design

SOS Hermann Gmeiner School Bhaktapur, Nepal
Higher Secondary Education (10+2) – Science (GPA: 3.56) 2017 - 2019

Everest Higher Secondary Boarding School Kathmandu, Nepal
Secondary Education Examination (GPA: 3.85) 2017

Work Experience

Fablab Nepal (Technical Assistant)
Design and Fabrication
(April 2025 - Present)

- CAD design and modeling in SolidWorks, Vetric Aspire, CorelDraw, and slicers.
- Design for and operation of CNC laser, 3-axis CNC router, 3D printers, vinyl cutter, and PCB milling.
- Conducted hands-on training sessions for teachers, students, and other participants on 3D printing, laser cutting, and basic electronics.
- Independently designing and developing a personal chess-playing robot project.

Multiscope Solution Pvt. Ltd.
Energy Audit, Energy Planning and Management, Energy Optimization and Decarbonization
(June 2024 - April 2025)

- Mechanical Engineer on AEPC/WECS-supported sustainable energy projects.
- Developed Municipal Energy Plans supporting the transition from traditional fuels to modern and efficient energy technologies; conducted energy modeling and GHG projections.
- Performed energy audits and contributed to national Energy Audit Guidelines (2024).

Ropeway Nepal

Design And Modeling Of Ropeway Assembly

Internship (Oct 2023 - Dec 2023)

- 3D modelling of ropeway gondola.
- 3D modelling of ropeway chassis.
- Design of ropeway driving mechanism.

Projects

Design and Fabrication of Manufacturing Machine for Bamboo Panel Production Process

B.E. Final Year Project

- Designed and developed an automated panel production system.
- Converted a bottle jack into a press by designing an innovative curved cam follower, enabling customized motion of the follower for enhanced precision and efficiency.
- Performed structural and thermal analysis of mechanical systems using ANSYS
- Conducted strength testing of the produced bamboo panels using a universal testing machine (UTM).

Design and Fabrication of an Injection Molding Machine

Fablab Nepal

- Designed the machine in SolidWorks, creating a complete model ready for fabrication.
- Prepared shop drawings for metal parts and cut wooden components using a CNC router for precise assembly.
- Integrated heating, electrical, and control components.
- Assembled and tested the machine for reliable operation.

A Comparative Study of Electrolyte Performance in Laser-Induced Graphene Supercapacitors

- Optimized laser parameters for production of graphene.
- Fabricated LIG supercapacitor electrodes on polyimide tape.
- Assembled supercapacitors using acidic, basic, and neutral aqueous electrolytes.
- Compared performances of the supercapacitors.

Go-Kart Design and Fabrication | *4th year, B.E.*

- Engineered a robust chassis capable of accommodating a powerful 150cc TVS Apache four-stroke bike engine, enabling speeds of up to 85 km/hr.
- Performed static and impact structural analysis of chassis using ANSYS,
- Implemented innovative features such as adjustable camber angle and chain adjustment, enhancing maneuverability and customization for optimal performance on the racetrack.
- Secured first place in the Gokart race organized by Mechtrix.

Go-Kart Design and Fabrication | *3rd year, B.E.*

- Engineered a robust chassis capable of accommodating a powerful 180cc Bajaj Pulsar four-stroke bike engine, enabling speeds of up to 75 km/hr.
- Secured first place in the Go-kart race organized by Mechtrix.

Go-Kart Design and Fabrication | *1st year, B.E.*

- Designed and fabricated high-performance go-kart.
- Participated in Go-Kart race organized by Mechtrix 2076.

Automatic fin gate

- Design of automatic fin gate.
- Excellent aesthetics with minimal trajectory and weight balanced mechanism for optimal efficiency.
- Innovative mechanisms and designs.

Suffosafe: Automatic Bathroom Smoke Evacuation System

- Fabricated SuffoSafe, a safety solution prompted by a suffocation incident, swiftly removes excess vapour to ensure people's safety by enhancing bathroom ventilation and effectively detecting and mitigating smoke buildup.

Honors and Awards

BE Level 3D Design Hackathon (Mechtrix 2080) |SOMAES, IOE Pulchowk

- Awarded 2nd runner-up for automatic gate design.

Go-Kart winner (Mechtrix 2080) |SOMAES, IOE Pulchowk

- Awarded for 1st position for national-level Go-Kart race.

Go-Kart winner(Mechtrix 2079) |SOMAES, IOE Pulchowk

- Awarded for 1st position for national-level Go-Kart race.

Skills

Machining Tools: Lathe, Drilling, CNC Router, CNC Laser Cutter, Power Cutter, Welding, PCB Milling.

Softwares: Solidworks , ANSYS , Autocad, Python, Vectric Aspire, Coreldraw, 3D Printing Slicer, LEAP, Excel.