

# SAROJ BASNET

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[in LinkedIn](#) | [🌐 Website](#) | [🔗 GitHub](#) | [📺 YouTube](#)

## PROFILE

Mechanical Engineer skilled in computational design, simulation (ANSYS, SolidWorks), and data analysis (Python, MATLAB, Excel). Combines strong theoretical knowledge with hands-on fabrication experience and a growing interest in machine learning applications to tackle complex engineering challenges.

## EDUCATION

### Bachelor of Mechanical Engineering

IOE, Pulchowk Campus – Tribhuvan University

📅 May 2021 – April 2025

📍 Pulchowk, Lalitpur

- Relevant coursework: Heat Transfer, Energy Resources, Thermodynamics, Fluid Mechanics, Vibration, Solid Mechanics, Machine Design, Manufacturing Processes, Operations Research, System Design and Simulation

### Higher Secondary Education

Nepal Mega College

📅 2018 – 2020

📍 Babarmahal, Kathmandu

- GPA: 3.65/4.00

## RESEARCH PROJECTS

### Design, Fabrication and Testing of Batch Distillation Apparatus for Alcohol Micro Distillery

Bachelor Final Year Project

📅 June 2024 – March 2025

📍 Pulchowk Campus

- A fully functional batch distillation apparatus with reflux and bubble cap trays.
- Improved purity, ethanol concentration (from 61% upto 90%), and recovery ratio (from 0.22 upto 0.75) of the distillate.
- Selected for Pulchowk Innovation Program 2025.

### Fabrication of a Plastic Injection Molding Machine

Collaborated with a team of peers

📅 May 2022 – February 2023

- Built a plastic injection molding machine using locally available materials.
- Gained hands-on experience in manufacturing.

## AWARDS & HONORS



#### 3rd Rank among 12,000 Students

Secured 3rd position in IOE BE/BArch Entrance Examination 2021.



#### Winner – Design Hackathon, MechTriX 2025

Led a 24-hour 3D design competition project to design a modular, versatile, and cost-effective small-scale agricultural machine for cash crop cultivation in Nepal.



#### Award-Winning Distillation Project

2nd Runner-up – Nepal Techno-Fest 2025 and INNOCHEM'25 for designing an innovative batch distillation apparatus.



#### Best Engineering Award – MechTriX 2023

Built a functional plastic injection molding machine using locally sourced materials.

## SKILLS

Engineering Tools: SolidWorks AutoCAD ANSYS (Fluent, Mechanical)

Programming & Data Science: Python Machine Learning MATLAB C Excel Solver

Productivity: Microsoft Word, Excel, PowerPoint LaTeX Adobe Premiere Pro

Languages: English (Fluent) Nepali (Native)

EXPERIENCES

Mechanical Engineering Intern  
Gorkha Brewery Pvt. Ltd. (Part of Carlsberg Group)

September – October 2024 Mukundapur, Nawalpur

- Optimized plant layout to improve operational efficiency and workflow.
- Documented mechanical components, machine parts and running hours for maintenance records.

Teaching & Content Creation

2022 – 2025

- Taught Physics entrance preparation classes for +2 students at Nepal Mega College.
- Conducted a workshop on scientific calculator usage for engineering entrance students at Ambition Guru.
- Grew YouTube channel to 10k+ subscribers and 1.5m+ views through creation of educational content.

TRAINING & WORKSHOP

Startup Orientation Workshop & Bootcamp  
Industrial Enterprise Development Institute (IEDI)

06 – 23 May 2025 Kathmandu, Nepal

- Completed intensive 13-day training on entrepreneurship, business planning, and startup development.
- Applied market research and financial analysis techniques to develop a feasible business concept.
- Created and pitched a complete business plan under expert mentorship.

REFERENCE

Available upon request.