

Aashish Dumre

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PROFILE

I am an enthusiastic mechanical engineer who has a keen interest in energy and manufacturing design for solving pragmatic problems using advanced engineering knowledge.

Registered Engineer of Nepal Engineering Council (6767 Mechanical 'A' Category)

EDUCATION

Bachelor's of Engineering, Mechanical Engineering(80.83%, Distinction), 2017 – 2022
Institute of Engineering Thapathali Campus, Tribhuvan University Kathmandu, Nepal
Electric Machines, Fluid machines and mechanics, Finite Element Analysis, Operational research and Management, Mechanical design and simulation, and Energy resources.

PROFESSIONAL EXPERIENCE

Research Assistant (RA), Energy Systems Research Laboratory (ESRL), Thapathali Campus Apr 2022 – present
Kathmandu, Nepal

- Working as a Research Assistant for EV Charging Station Modeling and its implementation.
- Energy Modeling, Optimization, and Computation using CPLEX studio, Python.
- Documentation, Presentations, and Excel report.

System Design and Maintenance Intern Engineer, Suryodaya Urja Pvt.Ltd Aug 2021 – Nov 2021
Kathmandu, Nepal

- Load Calculation, design, and Installation of solar panels for domestic and commercial purposes, maintenance, and proper handling of inventories.

PROJECTS

Locating the optimal locations for charging station: A case study of Kathmandu valley Jun 2021 – May 2022
Energy modeling, Optimization via Python and result plotted using GIS in map.

Study of the Nepal Stock Exchange Limited Jul 2021
Mathematical modeling, Optimization , Time series forecasting, Monte-Carlo Simulation

Solar PV array design May 2021 – Jul 2021

- Total energy consumption, Solar PV panel design and power calculation
- Designed a solar water pump for irrigation(Water demand 1500000 Liter/day)

A case study on Solid waste management of Kathmandu Valley 2021
Daily volume(1200metric tonnes), dumping site capacity, organic waste and biomass to energy conversion using energy bin

Biogas plant design 2021
A medium-scale plant was designed to replace LPG from the mess of the Thapathali Campus (Serves 1500 students/day)

AWARDS

Batch Topper (2017-2022), IOE Thapathali Campus Bachelor's in Mechanical Engineering	2022
First position in Glider Plane Competition, SOMES, IOE Pulchowk Campus	Feb 2020
MAHATMA GANDHI SCHOLARSHIP SCHEME 2015-2016, Government of India For class XI and XII	2015
Academic Excellence Award, Thapathali Campus Financial assistance of Rs.1406 (8/8 semester) in engineering	

PUBLICATIONS

Conference Proceedings Title: "Locating the optimal EV charging stations for public vehicles: A case study of Kathmandu Valley," Engineering, Sustainable Development, and Artificial Information.2022 Accepted at the 9th National Conference on Science and Technology at Nepal Academy of Science and Technology (NAST)	Jun 2022 Kathmandu, Nepal
Unpublished Manuscripts <ul style="list-style-type: none">• Under review Title: Locating the Optimal EV Charging Stations for Public Vehicles	

EXTRACURRICULAR ACTIVITIES

Volunteered 12th IOE graduate Conference	Freshers Quiz Contest 2075 and Inter College Debate Competition
UNDESIGNED WORDS- A poem concert Organizing Committee	Sub-coordinator

COURSES AND TRAINING

Crash Course on Python, Google-Coursera	2022
ANSYS, Solid works	2021
Solar Energy Basics, Electric Power Systems and Digital Manufacturing and Design, Coursera Authorized by The State University of New York and University of Buffalo	2020
Robotics Week 2.0 Fabrication of various mechanical components,	2018
Workshop on Business Development from Renewable Energy: Economic Perspective, Green Hydrogen Lab, Kathmandu University	

SKILLS

AutoCAD, Solid works(2D and 3D modeling), GIS, MATLAB, Maple, ANSYS
Language/Libraries (C, Python, CPLEX)
MS Office packages, Solver Add-in, Monte- Carlo simulation, Time series forecasting
Workshop (Fabrications, Welding, Maintenance, Material Handling) Languages (Nepali, English, Hindi)