

Aashish Dumre

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Work Experience

08/2023 – present Wichita, KS, USA	Graduate Research Assistant <i>Wichita State University</i> Working on Clean Energy Innovation Research Laboratory <ul style="list-style-type: none">Detection of H₂ at low concentration (ppm & ppb level) using H₂ pump-Department of Energy (DOE)
04/2022 – 08/2023 Kathmandu, Nepal	Research Assistant (RA) <i>Energy Systems Research Laboratory (ESRL), Thapathali Campus</i> <ul style="list-style-type: none">EV Charging Station Modeling and its implementation.Energy modeling, optimization, and computation using Python and GIS for location mapping.Teaching Assistant (Department of Mechanical Engineering) - (04/2023 - 08/2023)
08/2021 – 11/2021 Kathmandu, Nepal	System Design and Maintenance Intern Engineer <i>Suryodaya Urja Pvt.Ltd</i> <ul style="list-style-type: none">Load Calculation, design, and installation of solar PV for domestic and commercially.

Education

08/2023 – present Wichita, Kansas, USA	Master of Science , Mechanical Engineering <i>Wichita State University</i> Renewable Energy, Energy and Sustainability, FEM, Energy analytics and management.
2017 – 2022 Kathmandu, Nepal	Bachelor's of Engineering, Mechanical Engineering (80.83%) <i>Institute of Engineering Thapathali Campus, Tribhuvan University</i> Fluid machines and mechanics, Operational research and Management, Heat Transfer.

Skills

Electrochemistry Gamry Instruments, Membrane Electrode Assembly (MEA), Labview Instruments	Language/Libraries Python, C, CPLEX
Design and Simulations AutoCAD, Solid works(2D and 3D modeling), GIS, MATLAB, Maple, ANSYS	Energy analysis and efficiency AIRMaster+, HOBOWare, PHAST, Monte-Carlo Simulation, Time series forecasting
Workshop Fabrications, Welding, Maintenance, Material Handling	Languages Nepali, English, Hindi

Extracurricular activities

Registered Engineer in Nepal Engineering Council 6767 Mechanical 'A' category	Volunteered 12th IOE graduate Conference - 2022
Volunteered at Jigyasa - 2019 Techfest- Imagine, Invent, Inspire	Blood Donation Campaign - Lions Club (2022)

Leadership and Membership

04/2025 – present	The Honor Society of Phi Kappa Phi ☑ <i>Member</i>
06/2024 – present	The American Society of Mechanical Engineers ☑ <i>Member</i>
05/2024 – present	Wichita State University Nepalese Student Association (NepSA) <i>Treasurer</i>

Projects

06/2021 – 08/2023	Locating the optimal locations for charging station: A case study of Kathmandu valley Energy modeling, Optimization via Python and result plotted using GIS in map.
07/2021	Study of the Nepal Stock Exchange Limited Mathematical modeling, Optimization , Time series forecasting, Monte-Carlo Simulation
05/2021 – 07/2021	Solar PV array design <ul style="list-style-type: none">• Total energy consumption, Solar PV panel design and power calculation• Designed a solar water pump for irrigation(Water demand 1500000 Liter/day)

Courses and Training

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