Bikash Kunwar
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https://b-kunwar.github.io/

Education

Nov. 2015 – Nov. 2019 B.E. in Mechanical Engineering – Pulchowk Campus

Final year project – Design, Fabrication and Test of Unmanned Aerial Vehicle

Jul. 2012 – Sept. 2014 Higher Secondary Education – St. Xavier's College

Apr. 2000 – Mar. 2012 School Leaving Certificate – Future Brighter Secondary

Work Experience

Jan. 2020 – Apr. 2022 Prokura Innovations – Mechanical Design engineer (drones)

- Design fixed-wing, multirotor, hybrid drones to meet mission requirements by optimizing aerodynamics, propulsion, strength and durability
- Ensure the stability and control of the designs
- Study of the propellers operating at low Reynolds number
- Develop methodology for fabrication of fuselage, wing, and control surfaces
- Develop thermal management system for battery packs
- Prepare guiding documents and write articles on several related topics
- Seek potential collaboration with private and public partners/organizations
- Mentor interns

Jul. 2018 – Jun. 2019 Society of Mechanical Engineering Students, Pulchowk Campus – President

- Worked to improve department – student communication
- Raised fund, funded student projects and organized events to demonstrate the projects to professionals and public
- Organized national level mechanical and aerospace exhibition, MechTRIX X
- Initiated talk series, MechTALK to inform students on the theme of engineering innovation and entrepreneurship
- Initiated the campaign for establishing Alumni Network of graduates
- Initiated and organized MechCUP, a football tournament to strengthen the network of technical students across the country through sports.
- Initiated the campaign for establishing Alumni Network of graduates

Jan. 2018 – Jul. 2018 Motherland Academy – Part time teacher (science and mathematics)

Jan. 2017 – Oct. 2017 Kathmandu Infosys – External feedback provider/ content writer

Awards

2018 Best Application Award (BE Mechanical Design Competition, MechTRIX 8.0)

2017 Title Winner (BE Mechanical Design Competition, MechTRIX 7.0)

2011 Zonal Level Story Writing Competition (Dhawalagiri zone)

Programming Experience

2021 Self -teaching C++ and Python

2021 Used MATLAB to develop a propeller performance prediction tool

2017 Used Arduino (based on C/C++) for making fire-fighting robot

2017 Used Python in Summer Workshop in Computational Sciences

2016 Developed a guessing game called Hangman in C

2014 Used Arduino to make obstacle avoiding robot

Other activities

2021 Mentor to interns for development of drones

2019 Chair of Science and Technology Seminar

2018 Master of Ceremony for Farewell program for passing graduates

2018 Formal inauguration of MechTRIX 8.0

2017 Master of Ceremony for Welcome program for recent undergraduates

Interest and competencies

Modelling	Deft at using SolidWorks to create 3D models Familiar with CATIA
Simulation	Good at using ANSYS and OpenFoam for CFD applications Beginner at using Gazebo and MATLAB

Publications

Darlami, K., Amatya, A., **Kunwar, B.**, Poudel, S., & Dhakal, U. (2020). Design and analysis of twin-vertical-tailed fixed-wing unmanned aerial vehicle. *Journal of Automation and Automobile Engineering*, *5*(3), 12–30. https://doi.org/10.46610/joaaen.2020.v05i03.003