Rabin Giri

Pulchwok,Lalitpur, Nepal
+977-9849780239
075mscsk015.rabin.pcampus.edu.np

RESEARCH INTERESTS

Robotics, Deep Learning, Real Time System, Embedded System

EDUCATION

Tribhuvan University, Institute of Engineering, Pulchowk Campus

Masters in Computer System and Knowledge Engineering (2019-Present)

Tribhuvan University, Institute of Engineering, Pulchowk Campus

Bachelor in Electronics and Communication Engineering (2012-2016)

Skills

Programming*:* Python, C/C++, Bash, Assembly Programming, Linux System Programming, FreeRTOS, MATLAB, ARM-CMSIS ,Arduino

Robotics*:* ROS, Linux, Real Time OS , Control System, Circuit Simulation

ML*:* Gym, Pytorch, Numpy, Scikit-learn, Matplotlib

Research and Work Experience

Robotics Engineer and Co-founder at Paaila Technology(2016-Present)

Autonomous Navigation:Occupancy grid mapping, Particle-filter localization, TEB local planner and PID controller for navigation of social robots, 'Pari', 'Pari 2.0' and 'Ginger'.

Traffic Control System:Lead Engineer and Manager of Traffic control System Project both Hardware and Software, System is currently used on Kathmandu(capital city of Nepal) and other big cities of Nepal.

Low Cost Portable Ventilator:Affordable, highly reliable ventilator to provide life support. Jointly worked with Project Red.

Variable Frequency Drive: Low cost three phase VFD for induction motor for brick industry in Nepal based on Space vector modulation.

Rani Jamara Kularia Irrigation Project, *dam door control system*
Rani Jamara Kulariya Irrigation Project is one of the National Pride Projects of Nepal. I have lead and develop Software and hardware-electrical system for irrigation dam door control.

Co-founder at Naulo Robotics Restaurant (2018-Present)

Built waiter robots named 'Ginger' to serve food to the table.

Adaptive PID Controller for Two Wheel Self Balance Robot based on Reinforcement Learning

Two Wheel Self Balance Robot is my 3rd semester master project in which I have worked on deep reinforcement learning and PID System. Robot is balance with the help of PID controller and parameter of PID is obtain from actor-critic neural network.

Autonomous Navigation of Wheelchair, *B.E final year project*

Converted an electric wheelchair to autonomous wheelchair SLAM navigation on ROS platform.

Asia Pacific Robot Contest (ABU Robocon), *2015,Indonesia. 2016,Thailand.*

Team Member of Team Nepal. My responsibility was to build game strategy ,embedded software ,Robot odometry, Holonomic drive control system and Robot communication system.

Publications

Autonomous Navigation of a Mobile Robot in Indoor Environment, *Zerone Scholar 2016. . Bimal Paneru, Sagar Shrestha, Niraj Basnet,* ***Rabin Giri****, Dinesh Baniya Kshatri.*

Honors and Achievements

- **Ncell Innovation Driven Crisis Response ICT Award** for Paaila Technology 2020
- **National ICT Innovation Award** by Ministry of Communication and Information Technology for Paaila Technology, 2019
- **IOE Scholarship**, full scholarship for Masters study at Pulchowk Campus, Tribhuvan University, 2019
- **Most Creative Business of Nepal** by Antarprena, 2018
- **Best Startup** of Nepal by ICT Magazine, 2017
- **Best Engineering Award** and **Panasonic Award** ABU Robocon 2016, Thailand
- **Best Idea Award** and **Mabuchi Motor Award** ABU Robocon 2015, Indonesia
- First Position in annual **National Technological Festival LOCUS** for three years (2014-2016) in a row under different themes
- **IOE Scholarship**, full scholarship for Diploma in Engineering study at Thapathali Campus, Tribhuvan University, (2010-2012).

Leadership and Voluntary Works

- Organizer of **IOE Robocon 2016,** inter-college national robotic contest
- Built and installed Charito Ghar, pre-fabricated houses for earthquake(2015) victims
- Taught ’Scratch’ to primary school students to kindle programming interest in them, as part of Young Leader’s Collaboration for Global Health 2015 Project