Saju Khakurel

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EDUCATION

Bachelor's Degree in Electronics and Communication Engineering 2017 – 2022
Tribhuvan University, Institute of Engineering, Pulchowk Campus, Aggregate: 69.68% Lalitpur, Nepal

Higher Secondary Education (10+2) 2015 – 2017
Kathmandu Bernhardt College, Aggregate: 78.30% Kathmandu, Nepal

PROFESSIONAL EXPERIENCE

Embedded System Engineer (Vehicle Software) 2021/04 – present
Yatri Design Studio Kathmandu, Nepal
- Development of full functioning Over The Air software project for bike and charging stations embedded system
- Internal Server design for charging station
- One wire temperature sensor, handlebar push buttons coding, OBD Flash, inertial measurement sensor, MMC interfacing

Intern 2021/12 – 2022/04
Yatri Design Studio Kathmandu, Nepal
- Research-oriented internship in OTA programming using C/C++ language

Hardware Designer and Embedded System Programmer 2018 – 2020
Robotics Club, Pulchowk Campus Lalitpur, Nepal
- Design, fabrication, and testing of electronics hardware of robots for ABU ROBOCON 2019 and 2020
- Hardware designing and Embedded programming

Social Media Manager and Content Creator 2021 – 2022
IEEE-Pulchwok Student branch Lalitpur, Nepal

Newsletter Editor 2020/02 – 2020/12
IEEE-Pulchowk Student branch Lalitpur, Nepal

Avionics system designer, Team Member 2020/08 – 2020/12
NEAR Aerospace Lalitpur, Nepal
- Design and manufacture data acquisition modules
- Research on control and proper landings

PROJECTS

Disinfectant Robot 2020/07 – 2021/06
Funded by Nepal Academy of Science and Technology (NAST)
- As a part of the COVID-19 biomedical research project
- PCB design, fabrication, and program to create the embedded system of the robot
- 2D disinfectant spray mechanism controlled through a mobile app via Bluetooth

Automatic Modulation Classifier using DL 2021/05 – 2022/04
Final Year Project, Pulchowk Campus
- Mainly aiming to create an intelligent system for the classification of modulation type for incoming noisy signals using the trained DL models
- Implemented RNN using the LSTM model

- Multiple observations were made changing the layers of the network like Bi-LSTM, with/without attention layer

Simultaneous Localization And Mapping (SLAM) 2020/11 – 2021/02
- Implementation of tiny SLAM algorithm using turtlebot3 packages provided by ROS and aided by simulating as well as visualizing tools
- Used the Particle Filter to optimize the position

Hand gesture controlled car 2018/01 – 2018/02
- Motion-controlled miniature vehicle from a distance using a gyro module, Bluetooth, and Arduino

Rockbye Baby 2020/01 – 2020/02
AI powered Smart Cot
- Winner of LOCUS Project Competition - SDG 3 category, LOCUS 2020
- Designed a moisture sensor using a 555 timer

VOLUNTEER AND LEADERSHIP

IEEE Student Branch 2020/02 – 2022/04
Committee Member Pulchowk Campus
- The establishing committee member
- Organized multiple programs like webinars, blood donations, weekly tech talks

Instructor/Mentor 2019 – 2022
Locus 2019/2020/2022 Pulchowk Campus
- Basic and advanced hardware courses
- Breadboarding, Arduino, Soldering, Sensors, Motors, PCB design, and fabrication

Instructor/Mentor 2020/01 – 2020/02
Godawari Residential School Godawari, Lalitpur
- Mentored middle school students for their science exhibition regarding technical projects conducted by Robotics Club, Pulchowk Campus

SKILLS

C/C++, Python, KICAD, PCB Designing, Robotics, ROS, Embedded Systems

COURSES

3rd Nepal Winter School in AI, 2021 2021/12 – 2021/12
Nepal Applied Mathematics and Informatics Institute for Research

AWS Academy Cloud Foundations [5459] 2021/10 – 2021/12

Deep Learning Specialization 2021/08 – 2021/10

RADAR 2021/05 – 2021/08
Pulchowk Campus
- Elective I

Machine Learning by Stanford University 2021/06 – 2021/07