SUJAN KHADKA

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Summary

With heartfelt enthusiasm fueled by a passion for leveraging technology to solve complex problems and propel advancements in various industries, I am Sujan Khadka, an Electrical and Electronics Engineering Graduate from Kathmandu University. I am currently working as a Broadcast Assistant Engineer in Dish Media Network Limited, a reputed and leading broadcasting company in Nepal. Starting with a bit of hard work and impressive performance in the selection process, I found myself being selected for the professional job even before officially graduating as an Engineer. Additionally, I had the privilege of being involved in a project where the installation of CCTV network for the highway was going on during my internship.

I have a keen interest in wireless communication and have been grabbing possible knowledge in machine learning through online courses. My interests lie in exploring innovative realms of wireless communication, antenna design, and machine learning. With a sincere desire to learn, I aspire to contribute to the field through dedicated research and development, drawing on my solid academic foundation and practical industry experience.

Education

Fall 2018 – 2023 – Kathmandu University-School of Engineering, Dhulikhel, Nepal

Bachelors of Electrical and Electronics Engineering (Specializing in Electronics and Communication Engineering)

CGPA- 3.24/4

Coursework: Object Oriented Programming with lab works, Analog and Digital Electronics with lab works, Analog and Digital Signal Processing with lab works, Computer Architecture & Organization, Microprocessor and Measurement & Instrumentation with lab works, Antenna and Propagation with lab works, Neural Network and Fuzzy Logic with mini-project, Communication Engineering I & II with lab works, Wireless Communication, Satellite Communication and Broadcasting, and Engineering Project I, II, III, and IV and more on courses section.

July 2016- April 2018 – Goldengate International College, Kathmandu, Nepal

High School, School Leaving Certificate, National Examination Board(NEB). (Science)

CGPA – 3.17

Coursework: Physics I & II, Chemistry I & II, Mathematics, Computer Science, English

Experience

June 2023 – Present – Dish Media Network Limited, Chyasikot, Lalitpur

Broadcast Assistant Engineer

- Broadcasting, Networking, Digital (and analogue) theory, Satellite Uplink/Downlink, Modulation/De-modulation, Radio Frequency, Encryption, Server Management

Winter 2022 – Ultranet Communication Pvt. Ltd.

Internship, Network and Fiber Support Engineer

- CCTV networking, Network Video Recorder
- Fiber-To-The-Home, ONT, OLT

Spring 2022 – Project Member – Orion Space, Bhaktapur

- Ground Station building for cube satellites
- Software Defined Radio
- Antenna Design, testing, and Deployment.
- Real Time Operating System Setup and Deployment.
- Other: Sat nogs setup, Planning.

Summer 2022 – Raspberry Pi Instructor – Society of Electrical and Electronic Engineer (SEEE), Kathmandu University

Two Days Raspberry Pi training to Undergraduate students of all levels at Kathmandu University

- Raspberry Pi setup and remote access
- Web server installation and setup
- Other: Use of GPIO, Server, and create mini project.

Fall 2022 – Technical Event Head – Society of Electrical and Electronic Engineer (SEEE), Kathmandu University Handling technology-related events like Hackathon, Online Circuit Competition, and Electronic Training Workshops.

- Event Management and Supervision
- Workshop trainer
- Other: Event Planning, technical support.

Fall 2019 – Electronics Instructor – Aaviskar-19 – Kathmandu University Robotics Club

Contributed in Electronics and Robotics Workshops and Training as an Instructor.

Projects

Facial Expression Recognition using Convolutional Neural Network

A basic model to predict emotion category for input facial images.

https://github.com/khadka-7/Emotion_Recognition_CNN

More similar projects: https://github.com/khadka-7

2022 – 2023 - Image Transfer using Slow Scan Digital Video (SSDV) Protocol – Fourth Year Academic Project, Kathmandu University

o Designed and build a Slow Scan Digital Video (SSDV) based system to transfer the images from Low Earth Orbit (LEO) using nanosatellites to the Earth's ground station. The study was focused on the implementation and testing of the system for image transfer in a very small Line of Sight (LOS) time available with a satellite in orbit.

2020 – 2022 – IOT based Home Appliances Monitoring and Management System – Third Year Academic Project, Kathmandu University

o Designed a fully functioning IOT-based Home Appliances Monitoring and Management System. The system consists of Raspberry Pi and other electronic components to fulfill the project objectives. The design has Internet and Intranet modes, which change automatically depending on the availability of the internet connection. Data related to appliances were stored on My SQL server in local and remote databases (Azure).

2019 – 2022 - Intercommunication System – Second Year Academic Project, Kathmandu University

o Designed five nodes with central control Intercommunication System to facilitate voice communication between the nodes. The connection between the nodes is possible only when the nodes are accessible. The working prototype was prepared without using any microprocessor/ microcontroller but with the ICs like multiplexers, de-multiplexers, flip-flops, gates, counters, level shifters, etc. The overall working prototype was prepared on a breadboard. While designing the prototype, one of the complex parts was dealing with the timing signal, but we acquired it in the lab using a 555 timer IC and counters.

Spring 2019 - An IR Sensor based doorbell – First Year Academic Project, Kathmandu University

o Prepared an IR sensor implementing "Astable mode" in NE555 timer and applied as a doorbell for application.

Skills

Electronics & Simulation

PCB design (Eagle - KiCAD) / LT - Spice / Opti system / GNU Radio / Cisco - Packet tracer / Remote Support Tools / Proteus/Multisim / Raspberry Pi / MATLAB/Simulink / Wireshark / IoTs/Arduino / NS2 Simulator / Broadcasting / Networking / Digital (and analogue) theory /

Programming

Neural Networks / C/C++/Python/Embedded C / Linux (OS)

Presentation & Writing

Public-Speaking / Microsoft Azure, Microsoft 365 / Presentation Techniques and Teamwork / Academic and Technical Writing

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Relevant courses – Undergraduate, Kathmandu University, School of Engineering

Object Oriented Programming [COMP-116]/ Digital Logic [EEEG 202]/ Computer Organization and Architecture [COMP 201]/ Microprocessor [EEEG 314]/ Analog and Digital Signal Processing [EEEG 313/ 305]/ Communication System Engineering [ETEG 320]/ Data Communication Networks [ETEG 303]/ Antenna and Propagation [ETEG 402]/ Optical Fiber Communications [ETEG 422]/ Neural Network and Fuzzy Logic [ETEG 425]/ Satellite Communication and Broadcasting [ETEG 427]/ Wireless Communications [ETEG 432], Engineering Projects I, II, III & IV.

Certifications

Learn Verilog with Xilinx VIVADO Tool

Digitronix Nepal on Udemy/ 2023

An introductory course to hardware level programming. Certificate

Python Course

Horizon Tech on Udemy/ 2021

A mid-Level python course. Certificate

IoT (Internet of Things) Wireless & Cloud Computing Emerging Technologies

Yonsei University (Coursera)/ 2024 Certificate

Qualcomm Academy (Coursera) Certificate

Linux System Programming and Introduction to Buildroot

University of Colorado Boulder (Coursera) Certificate

Neural Networks and Deep Learning

DeepLearning.AI Certificate

Generative AI with Large Language Models

DeepLearning.AI Certificate

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning

DeepLearning.AI Certificate

Recommendations

Head of Department – Kathmandu University

Name: Ram Kaji Budhathoki, PhD

Phone: (+977) 9851183818

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Professor – Kathmandu University

Name: Bhupendra Bimal Chhetri, PhD

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Assistant Professor – Kathmandu University

Name: Anup Thapa, PhD

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Language

[Nepali – Native]   [English – Proficient]