



Rajesh Gautam

Electrical and Electronics Engineer

My Contact

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📍 Banepa, Kavrepalanchok, Nepal

About Me

As an enthusiastic electrical and electronics engineer I am passionate about robotics and automation, I have developed a strong foundation in electrical engineering principles and advanced technologies. My curiosity and love for learning have led me to constantly explore new ideas and concepts in the field, allowing me to stay on the cutting edge of innovation. My strong leadership and communication skills will enable me to work effectively in teams and motivate others to achieve common goals. Additionally, I possess a deep understanding of electronics, including the design and analysis of complex systems.

Education Background

- **Melamchi Ghyang Secondary School**
Secondary School
Completed in March 2017
- **Bagiswori Secondary School**
High School
Completed in April 2018
- **Kathmandu University**
BE in Electrical and Electronics Engineering
Completed in May 2023

Undergraduate Course Highlights

Mathematics, Physics, and Chemistry

Calculus and Linear Algebra, Advanced Calculus, Differential Equation and Complex Variables, Numerical Methods, Statistics and Probability, General Physics (I&II), General Chemistry

Electrical, Electronics, and Communication

Basic Electrical, Electrical Machines, Electronics (I&II), Network Analysis, Digital Electronics, Computer Architecture, Microprocessors, Measurement and Instrumentation, Power Apparatus and Systems, EM Field and Waves, Renewable Energy System, Signal and System, Digital Signal Processing, Communication System Engineering, Satellite Communication, Microwave Communication, Data communication and Wireless Networks, Antennas, Optical Fiber, Digital Switching and Tele-traffic Engineering, Principles of Biomedical Engineering

Programming, Management, and Environment

Structured and Object Oriented Programming (C&C++), MATLAB, Environmental Engineering, Economics, Engineering Management, Entrepreneurship and Development

Work experience

Internship

Ultraneet Communication Private Limited

- Jan 2023–Feb 2023
- Surveyed highway for CCTV surveillance system
- Designed a power backup system
- Installed fiber network
- Gained practical experience in networking

Leadership experience

Treasurer

Kathmandu University Robotics Club

- Jan 2020–Feb 2021

Editor-in-Chief

Kathmandu University Robotics Club

- July 2019–December 2019
- Published annual magazine 'AAVISHKAR'

Member of an organizing team

- Annual national robotics festival organized by Kathmandu University Robotics Club in 2019

Volunteering and workshops

- Participated as a trainer in the CanSat workshop (Weather monitoring station)
- Robotics workshop trainer at Kathmandu University Robotics Club
- Electronics workshops to different schools and colleges
- Volunteered in Ground station design for CubeSat in Orion Space Nepal
- Workshop on renewable energy system planning organized by ICIMOD
- Volunteered as a Raspberry Pi workshop trainer for the workshop organized by the Society of Electrical and Electronics Engineering at Kathmandu University
- Mobile application development workshop organized by Rotaract Club Kathmandu University

Digital Skills

- Circuit and PCB design- Experienced
- AutoCAD- Skillful
- Computer language: HTML, CSS, PHP, JS, Python, C, C++- Skillful
- 2D/3D modeling and graphics- Skillful
- CISCO Networking- Skillful
- MATLAB, Ansys HFSS

Hardware Skills

- Computer hardware and networking
- Optical fiber installation
- Electronics boards, sensors, actuators, measuring instruments and devices
- Solar panel and battery installation
- 3-phase modeling and wiring
- Microcontrollers, sensors, motors, generators, transformers

Academic Projects

Home Automation System

UNG First Year Project- Designed and implemented automatic lighting, temperature-controlled rooms, and a security system for a home.

Laser-Based Visitor Counter

UNG Second Year Project- Designed and implemented a visitor counting system using laser beams and photo sensors for large hallways and gates.

IoT-Based Municipal Waste Monitoring System

UNG Third Year Project- Designed a prototype for the waste level monitoring in bins and optimization of waste collection routes for the municipality to control spillover using mobile and web applications.

Study on Beamforming Techniques for MIMO System in mm-wave Communication

UNG Final Year Project- A research-based project to study phased array systems and beamforming techniques in mm-wave communication.

References

- **Bhupendra Bimal Chhetri-Professor**
Kathmandu University Department of Electrical and Electronics Engineering
Email: bhupendra.chhetri@ku.edu.np
- **Ram Kaji Budhathoki- Associate Professor, Department Head**
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