

Andis Paudel

 and-is |  andis-paudel |  andispaudel@gmail.com |  +977-9862709753
Pulchowk Campus Hostel, Lalitpur, Nepal

SUMMARY

DevOps- and networking-focused engineering undergraduate with strong foundations in Linux systems, cloud infrastructure, containerization, and software-defined networking. Hands-on experience with Docker, SDN using Ryu, Mininet-based experimentation, SDR workflows, and Linux-based system analysis. Proven leadership in technical programs and student governance, combined with practical exposure to cybersecurity labs, observability workflows, and infrastructure automation concepts.

EXPERIENCE & LEADERSHIP

Research Intern, Space Research Center – NAST

May 2024 – Present

- Working on CubeSat subsystems with emphasis on communication payloads and ground segment experimentation.
- Conducting SDR-based experiments in the Space Research Center SDR laboratory, including signal generation, reception, and spectrum analysis.
- Developing and testing GNU Radio and Python-based DSP pipelines for satellite and wireless communication research.
- Supporting experimental validation using RTL-SDR and USRP hardware.

Design Chief / Program Coordinator, LOCUS 2025

June 2024 – March 2025

- Led a design and operations team delivering branding assets, technical posters, and event materials for Nepal's largest engineering fest.
- Coordinated the RoboLine Dash competition, managing 10 volunteers and 7 teams following a two-day technical workshop.

Member, Free Students Union – Pulchowk Campus

March 2023 – March 2025

- Elected representative among 2,699 students; youngest first-year student ever elected.
- Organized technical programs including coding competitions, debates, and interdisciplinary workshops.
- Coordinated with academic and administrative stakeholders to document and address campus operational and IT-related issues.

Instructor & Volunteer, Children in Technology Program

November 2025

- Delivered introductory sessions on computer networking, cybersecurity awareness, and technology fundamentals to school-level students.
- Conducted awareness programs on safe internet practices and responsible technology use.
- Taught students in underrepresented and rural regions including Surkhet, Jajarkot, and Dolpa (Karnali Province).

TECHNICAL SKILLS

DevOps & Cloud	Linux, Docker, container fundamentals, AWS (EC2, IAM, VPC basics), CI/CD concepts, Git, REST APIs, YAML, Bash scripting.
Networking & SDN	TCP/IP, routing and switching basics, SDN (Ryu, OpenFlow), Mininet, network monitoring and traffic analysis.
Security & Observability	Log analysis, Linux security basics, SOC fundamentals, threat modeling (basic), Wireshark, Nmap, SIEM workflows.
Programming	Python, Bash, C, C++, JavaScript, SQL.
Tools & Platforms	GNU Radio, GitHub Actions, Wireshark, Burp Suite (basic), Adobe Illustrator, Figma.

EDUCATION

2022 – Present	Bachelor in Electronics, Communication and Information Engineering Pulchowk Campus, Institute of Engineering, Tribhuvan University Average: 86% Relevant coursework: Computer Networks, Operating Systems, Security Operations, Wireless Communication, Database Systems, Data Structures and Algorithms
2019 – 2021	SOS Hermann Gmeiner School, Bhaktapur GPA: 3.73

SELECTED TECHNICAL PROJECTS

DRL-Enabled SDN Load Balancing (Major Project)	2024 – Present
<ul style="list-style-type: none">– Designed a fat-tree topology in Mininet controlled via a Ryu SDN controller.– Implemented dynamic load balancing logic using server metrics and OpenFlow statistics.– Explored reinforcement learning approaches (DQN/PPO concepts) for adaptive traffic steering.– Focus areas: SDN control plane logic, observability, and network performance optimization.	
LoRa PHY Simulation and SDR-Based Reception	2025
<ul style="list-style-type: none">– Simulated LoRa transmission chains using Python-based DSP workflows.– Implemented demodulation and decoding logic from raw IQ samples.– Used GNU Radio, PySDR concepts, RTL-SDR, and USRP-based experimentation.	
Stock Price Prediction System	2024
<ul style="list-style-type: none">– Built deep learning models using BiLSTM and transformer-based architectures.– Combined time-series market data with news sentiment analysis.– Technologies: PyTorch, TensorFlow, Pandas, NumPy.	
CricTeam Database Management System	2023
<ul style="list-style-type: none">– Designed and developed a full-stack web application for managing cricket team and player data.– Implemented complete CRUD functionality with role-based data handling and validation logic.– Built a custom ORM layer to abstract database operations and improve maintainability.– Technologies: MySQL, Node.js, React, TailwindCSS.	

CERTIFICATIONS & HANDS-ON TRAINING

AWS	Solutions Architect – Associate; Well-Architected Framework, scalable system design, cloud networking, IAM fundamentals. Verification: 127b2c006b1746b98fde688c5e2628e0
Security	Designing Secure Software; secure SDLC, threat modeling, and security architecture principles. Badge ID: 150c9e30-f9bb-4e03-88be-2d4cf0f17180
TryHackMe	Top 3% ranked; 150+ hands-on labs covering Linux internals, packet analysis, web security, SOC workflows, and threat detection. Profile: andispaudel