

Ashwin Adhikari

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Objective

Engineering graduate with an offensive security mindset. Turning experience in CTFs, cryptographic challenges, and vulnerability assessment into robust defense strategies. Seeking to deconstruct and secure complex systems using a strong foundation in Python, Linux, and hardware logic.

Education

IOE Paschimanchal Campus(WRC), Tribhuwan University
BE in Electronics, Communication and Information

March 2021 – April 2025

Coursework:

- **Mathematics:** Engineering Mathematics(I, II, III), Probability and Statistics, Applied Mathematics, Discrete Structures, Numerical Methods, Discrete Structures, Digital Signal Analysis and Processing
- **Computer Science:** Computer Programming, Object Oriented Programming, Data Structure and Algorithm, Computer Graphics, Database Management Systems, Computer Networks, Artificial Intelligence, Enterprise Computing, Big Data Technologies, Multimedia Systems

Amarsingh Secondary School

June 2018 – July 2020

Intermediate Science

Coursework:

- Physics, Mathematics, Chemistry, Biology

Experience

Gajabaar Fellowship
Gajabaar

June 2024 – August 2025

- Learned cybersecurity fundamentals
- Solved multiple HackTheBox (HTB) machines and documenting the exploit chains
- Hands-on experience on Git, Bandit Overthewire
- Participated in Capture The Flag (CTF) challenges

Research Intern
WindPower Nepal

Nov 2023 – May 2024

- Worked with data related to energy and power sectors
- Attended meetings and presentations to learn project details
- Collaborated with a team to develop insights for renewable energy solutions
- Completed research, compiled data, updated spreadsheets, and produced timely reports

Content Creator
Offermandu Nepal

Apr 2021 – Oct 2023

- Produced and managed creative content to promote brands
- Created, managed, and promoted engaging content
- Collaborated with brands to enhance their online presence

Projects

Distinctive Approaches to 3D Scene Reconstruction: NeRF and 3D Gaussian Splatting [🔗]

- A research project comparing Neural Radiance Fields (NeRF) and 3D Gaussian Splatting for 3D scene reconstruction
- Integrated NeRFStudio for novel-view scene rendering and leveraged COLMAP for SfM point cloud generation, while implementing and critically analyzing leading research workflows in both methods.
- Designed and built custom photogrammetry hardware to capture images of small objects.
- Tools Used: Python, NeRF, 3D Gaussian Splatting, C++

Cryptopals [🔗]

- A collection of cryptography challenges designed to teach the fundamentals of cryptography through practical exercises
- Solved the cryptography challenges and also written write-ups for them
- Tools Used: Python

SMS Based Vehicle Tracking System [🔗]

- A vehicle tracking system that uses SMS for real-time location updates and monitoring
- Designed custom hardware to track the location of the vehicle and send the location to users mobile phone
- Tools Used: ArduinoIDE, GPS, GSM

Holiday Remainder [🔗]

- A web application that allows users to set reminders for upcoming holidays and events
- Customized the Nepali Calendar to fetch the dates and events and organized those to give remainder about holiday and events
- Tools Used: Django, React, HTML, CSS, JavaScript

Certifications

Ethical Hacker — Cisco [🔗] (July 22, 2025)

Linux Fundamentals — HTB Academy [🔗] (May 9, 2025)

Introduction to Applied Cryptography — University of London(Coursera) [🔗] (Oct 13, 2023)

Windows Fundamentals — HTB Academy [🔗] (Oct 07, 2023)

Introduction to Cybersecurity — Cisco [🔗] (Oct 06, 2023)

Introduction to Web Applications — HTB Academy [🔗] (Feb 06, 2023)

Technologies

Programming Languages: C++, C, JavaScript, Python, Java

Web Technologies: Django, React, HTML, CSS, Flask

Database: MySQL, SQLite

Tools: Git, Linux, Bash, Burpsuite