Ashwin Adhikari

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Objective

Cybersecurity enthusiast studying Electronics, Information and Communication Engineering. Skilled in penetration testing, vulnerability assessments, and security policy development. Experienced in reducing system vulnerabilities and supporting disaster recovery plans. Eager to apply my knowledge to strengthen cybersecurity in future roles.

Education

IOE Paschimanchal Campus(WRC), Tribhuwan University   *March 2021 – Present*
BE in Electronics, Information and Communication

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

Experience

Gajabaar Fellowship   *June 2025 – Present*
Gajabaar

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

Research Intern   *Nov 2023 – May 2024*
WindPower Nepal

- 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   *Apr 2021 – Oct 2023*
Offermandu Nepal

- 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

Cryptopals [⌀]
- A collection of cryptography challenges designed to teach the fundamentals of cryptography through practical exercises
- Solved the cryptography challenges and also written wiriteups for them
- Tools Used: Python, Cryptography

SQL Injection [⌀]
- A series of SQL injection challenges from PortSwigger Labs, designed to enhance skills in web security and database vulnerabilities
- Solved the labs using tools like Burpsuite and used python to automate the payloads
- Tools Used: Python, SQL, Burpsuite

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

Technologies

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

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

Database: MySQL, SQLite

Tools: Git, Linux, Bash, Jupyter Notebook, Burpsuite

Embedded Systems: Arduino, RaspberryPi, VHDL, ESP32