

# DIPIKA BHANDARI

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## EDUCATION

Illinois Institute of Technology, Chicago, IL

May 2025

**Master of Science, Cyber Forensics and Security (GPA: 3.90)**

- **Achievements:** Merit based Scholarship, Summa Cum Laude

Islington College, Kathmandu, Nepal

Oct 2022

**BSc. (Hons) Computer Networking and IT Security, (GPA: 3.80)**

- **Achievement:** Star Student, First class honors

## EXPERIENCE

**Islington College, Kathmandu, Nepal, Teaching Assistant, CCNA Tutor**

Jan 2023 – Aug 2023

- Optimized **hardware and network troubleshooting** using **Cisco equipment**, increasing network reliability by 80%.
- Taught networking protocols and concepts using Cisco Networking Equipment, enhancing students' understanding and practical skills.
- Delivered training on **network services and subnetting**, boosting practical skills by 80%.

**Techno Planet, Kathmandu, Nepal, Technical Support (Networking and IT)**

Jul 2022 – Nov 2022

- Configured **Mikrotik network devices and switches**, enhancing network efficiency and reliability.
- Configured **Cambium APs** and resolved device reset issues.
- Effectively resolved **printer issues** and set up **VPN connections** to optimize system performance.
- Mapped **shared drives** and deployed **Bitdefender antivirus** to improve data security.

**Employee Provident Fund, Kathmandu, Nepal, Internship as Technical Support (IT Support)**

Sept 2021 – Dec 2021

- Optimized **Windows settings** and resolved **CPU hardware issues** to reduce downtime.
- Managed and updated the **office network** and configured **access points**, enhancing network efficiency and connectivity.
- Organized and strengthened **IT infrastructure** through precise **cable crimping** and efficient **server rack management**.

## SKILLS

- **Tools:** Kali Linux, Metasploit, Burp Suite, Nmap, Wireshark, Autopsy, OpenStego, PuTTY, Splunk, VirusTotal, Palo Alto,
- **Technical Skills:** Penetration Testing, Vulnerability Management, Incident Response, Threat Intelligence, Security Assessment, Policy Compliance, Bash Scripting, SQL, Networking
- **Security Framework:** NIST-800, ISO 27001, OWASP, Risk & Compliance, Zero Trust

## PROJECTS

**Obfuscated JavaScript Detection Using Multi-Model ML Pipeline, Illinois Tech, Chicago, IL**

Apr 2025

- Built an **ML pipeline** to detect obfuscated JavaScript using **Random Forest, SVM, Logistic Regression, and KNN**.
- Preprocessed scripts by removing comments/whitespace; applied **TF-IDF with n-grams** for features.
- Evaluated and compared model performance using **precision, recall, F1 score, confusion matrix**, and visualization techniques.
- Achieved classification accuracy up to **100%** and automated performance reporting through visual summaries and metric analysis.

**Secure Database Architecture for Business Management System, Illinois Tech, Chicago, IL**

Nov 2024

- Implemented **Role-Based Access Control (RBAC)** to enforce least privilege, restricting unauthorized data access.
- Integrated **AES-256, TLS, and TDE** encryption to protect data at rest and in transit.
- Set policies for login attempts (**AC-7**), system use notices (**AC-8**), and audit logs (**AU-8**).
- Developed structured access controls with defined user roles, ensuring secure data handling and preventing privilege escalation.
- Created a security training log (**AT-4**) and risk plan (**CA-5**) for compliance.

**Penetration Testing of Vulnerable System (Acme - 192.168.1.100), Illinois Tech, Chicago, IL**

Dec 2023

- Identified vulnerabilities through structured penetration testing.
- Executed targeted exploitation of **unfiltered Network Ports** services to demonstrate potential attack vectors and data exposure risks.
- Leveraged industry-leading tools, including **Metasploit, Nmap, FTP, SSH, and Telnet**, to conduct reconnaissance, privilege escalation, and post-exploitation analysis.
- Proposed fixes: **secure login, access controls, port filtering, and app hardening**

**Final Year Project, Islington College, Kathmandu, Nepal**

Aug 2022

- Developed a web-based Hotel Management System using **Python (Django), HTML, CSS, JavaScript, Bootstrap, and SQLite**.
- Integrated **secure online booking and payment** features for seamless hotel reservations.
- Applied Rational Unified Process (RUP) methodology for structured project development.
- Conducted penetration testing (**SQL Injection, OS injection, password attack, XSS Vulnerability, CSRF, DoS attack**) to enhance system security.
- Performed unit testing, system testing, and user feedback analysis to ensure optimal functionality and usability.

**Password Attack of Wi-Fi, Islington College, Kathmandu, Nepal**

Jan 2021

- Conducted **WPA2-PSK** vulnerability analysis and penetration testing using **Kali Linux**
- Researched and documented **Wi-Fi security threats** with ethical and legal considerations.

## CERTIFICATIONS

- Tata Cybersecurity Security Analyst Job Simulation on Forage – June 2025
- CompTIA Security+ (In-Progress)