Gobinda Pandey

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Summary

Cybersecurity enthusiast focused on cyber physical systems security. Interested in network security, vulnerability detection, LLM security, adversarial machine learning, and offensive and defensive approaches to protect sensors and AI models.

Research Interests

Vulnerability detection in open source software and hardware, Network security, LLM security, Adversarial Machine Learning, Offensive and defensive security, Cyber physical systems security, Sensor attack modeling and detection.

Publications

Pandey, G., C, K. K., Lamichhane, N., & Subedi, U. (2023). *CNN based System for Automatic Number Plate Recognition.* Journal of Soft Computing Paradigm, 5(4), 347–364. doi:10.36548/jscp.2023.4.002.

Pandey, G., Sunar, A., Yogi, J., Poudel, N., & Koirala, K. R. (2023). *Electronic Health Record Management System using RFID: Improving Efficiency and Accuracy in Healthcare.* Journal of Information Technology and Digital World, 5(3), 274–290. doi:10.36548/jitdw.2023.3.004.

Sunar, A., Lamichhane, B., **Pandey, G.**, Yogi, J., & Poudel, N. (2023). *Trek Monitoring System: Enhancing Safety and Adventure in the Outdoors using Arduino UNO and NodeMCU.* Journal of Electronics and Informatics, 5(3), 235–252. doi:10.36548/jei.2023.3.001.

Education

St. Cloud State University   **St. Cloud, MN**
MS in Information Assurance   *Aug 2025 – July 2026 (Anticipated)*

Tribhuvan University   **Pokhara, Nepal**
B.E. in Electronics, Communication, and Information Engineering   *Nov 2018 – Sep 2023*

Experience

Patient Access Assistant, CentraCare Health System   *Oct 2025 – Present*
Assist patients with registration, insurance verification, and scheduling using Epic EHR software. Maintain accurate and confidential patient data in compliance with HIPAA standards. Collaborate with healthcare staff to ensure secure and efficient patient access workflows.

Production Assistant, Huskies Video Production Team   *Sep 2025 – Present*
Support live event streaming, camera operations, and technical setup. Handle audiovisual troubleshooting, data coordination, and ensure smooth production for university media events.

Graduate Research & Teaching Assistant, Rochester Institute of Technology   *Aug 2024 – May 2025*
Researched processor timing vulnerabilities and mitigation techniques using data-driven analysis. Developed secure monitoring tools and collaborated on research publications. Supported Side-Channel Analysis coursework, created lab content, and guided students on system security and performance testing.

Certifications

Nov 2024: **Reactor Certification, Chainalysis** – Acquired practical skills to analyze and trace Bitcoin transactions using the Chainalysis Reactor tool for blockchain forensics and cryptocurrency investigations.

Oct 2024: **Cryptocurrency Fundamentals Certification, Chainalysis** – Gained foundational knowledge of blockchain technology and cryptocurrency ecosystems, and learned to utilize blockchain explorers to investigate Bitcoin transactions.

Mar 2024: **Cybersecurity Specialization, Coursera** – Completed four advanced modules: *Introduction to Cyber Attacks*, *Cyber Attack Countermeasures*, *Real-Time Cyber Threat Detection and Mitigation*, and *Enterprise and Infrastructure Security*.

Dec 2023: **Google Cybersecurity Professional Certificate, Coursera** – Developed proficiency in threat analysis, SIEM operations using Splunk, and incident response techniques through hands-on labs and practical exercises.

Projects

2025: **Intrusion Detection using Machine Learning (SUEE1 Dataset)**
Developed intrusion detection models using Random Forest, SVM, and Logistic Regression. Performed feature engineering on network flow data and analyzed results using precision, recall, and ROC metrics.

2025: **Crotonylation Site Prediction Using Multi-Window Deep Learning**
Utilized pretrained protein language models (Prot5) to predict lysine crotonylation sites. Integrated global and local sequence features via attention-based fusion for higher accuracy.

2023: **Electronic Health Record Management System using RFID**
Developed a secure RFID-based EHR management prototype to improve healthcare data accuracy and streamline patient identification.

Skills

Programming: Python, C, C++, Bash, Assembly

Data/ML: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch

Networking & Security: Wireshark, Nmap, Burp Suite, Nessus, Metasploit, Cisco Packet Tracer

Web/Systems: Linux, Git, HTML, CSS, JavaScript, Flask, Node.js

Databases: MySQL, MongoDB, Oracle

Tools: Epic EHR, Microsoft Office Suite, LaTeX, Technical Writing, Collaboration

Honors and Awards

Research Assistantship Award – Granted by Rochester Institute of Technology for research and teaching excellence.

Winner – Battle for Speed Robotics Competition – Secured first position in robotics race organized by IOE Robotics Club.

Full Undergraduate Scholarship – Awarded by Government of Nepal for top academic rank in IOE entrance examination.