

Mradul Gupta

Cybersecurity Intern | Backend & Security Engineering

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<https://github.com/IamMradul> <https://mradul-mg.vercel.app/>



WORK EXPERIENCE

Intern - Co Hatch

May '25 – Jul '25

- Developed and tested backend REST APIs using Flask for internal tools
- Performed basic security analysis and debugging of backend services
- Used Git for version control and collaborated in an agile engineering environment
- Improved platform reliability by identifying bugs and optimizing API responses

PROJECTS

Advanced Fake News Detection System

- Built an end-to-end machine learning and NLP pipeline to classify news as real or fake with high accuracy using advanced text preprocessing and feature extraction.
- Evaluated and optimized models using precision, recall, and F1-score, delivering a scalable solution for automated misinformation detection.

Kalaamitra – AI-Powered E-Commerce Platform

- Developed a full-stack AI-driven e-commerce platform using Next.js, TypeScript, and Supabase, focused on scalability and performance.
- Integrated semantic search, vector embeddings, and AI-based product recommendations to enhance product discovery and user engagement.

Gesture-Based CAPTCHA System

- Designed a real-time gesture-based CAPTCHA system using MediaPipe, OpenCV, and Flask, achieving ~98% gesture detection accuracy.
- Implemented pose estimation and head-orientation-based liveness verification to prevent bot attacks and improve authentication security.

SKILLS

Cybersecurity & Core Concepts: Authentication & Authorization, API Security, Secure Backend Architecture, Input Validation, Basic Threat Analysis, Debugging, Linux Fundamentals, Version Control, System Reliability

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

Frameworks & Technologies: Flask, Next.js, React

AI / ML & Security Analytics: Machine Learning, NLP, OpenCV, MediaPipe, Scikit-learn, TensorFlow (basic)

Databases: PostgreSQL, SQLite, Supabase

Tools & Platforms: Git, GitHub, Linux, Vercel

SUMMARY

Computer Science Engineering student with hands-on experience in cybersecurity fundamentals, backend development, and secure system design. Skilled in building secure RESTful APIs, implementing authentication and authorization mechanisms, performing basic security analysis, and developing AI/ML pipelines for threat and misinformation detection. Strong foundation in Linux, API security, debugging, and system reliability. Seeking a Cybersecurity Intern role to contribute to secure, scalable, production-grade systems.

ACHIEVEMENTS

- Finalist, Google Gen AI Exchange Hackathon**, recognized among top-performing teams nationwide.
- Winner, Zinnovatio Hackathon**, awarded for innovative problem-solving and technical execution.
- Secured 2nd Position, University Coding Competition**, demonstrating strong algorithmic and problem-solving skills.

EDUCATION

Bachelor of Engineering (B.E.) in Computer Science and Engineering

Chandigarh University, Mohali, India

2024 – 2028

PUBLICATIONS & PATENTS

- Advanced Fake News Detection** — Published in International Conference on Intelligent and Secure Engineering Solutions (CISES 2025).
- Kalaamitra: AI-Powered E-Commerce Platform** — Filed (Web-Based AI E-Commerce System).

LANGUAGE

Proficient: English, Hindi