Ayushi Singh

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EDUCATION

UPES, B.Tech spz. Cyber Security and Forensics	August 2022 – Present
CGPA 7.84	*Dehradun, IN*
St. Mary's Convent Inter College, ISC Senior Secondary Education	April 2020 – March 2022
Percentage 75.60%	*Prayagraj, IN*
St. Mary's Convent Inter College, ICSE Higher Secondary Education	April 2018 – March 2020
Percentage 86.40%	*Prayagraj, IN*

INTERNSHIP

IBM — June 2025 - Present

Cyber Security Intern

- Gaining hands-on experience in real-time video analytics and Python-based alert systems
- Exploring hardware-software integration and embedded system design for perimeter monitoring.

PROJECTS

Smart Perimeter Security System — June 2025 - Present

ESP32, PIR Sensor, Python, OpenCV

- ∗ Engineering an IoT-enabled security system with motion-triggered alerts and human detection.
- ∗ Configured PIR sensor with ESP32 to trigger physical alarms via buzzer/LED.
- ∗ Designed Python module to capture webcam feed and apply basic video analytics using OpenCV.
- ∗ Deploying Telegram API for real-time alert delivery.

Cloud SIEM with Automated Response (SOAR) ⬀ — July 2025

Python, AWS (EC2, VPC, IAM), Terraform, Wazuh

- ∗ Successfully built and deployed a full SIEM/SOAR pipeline in AWS that reduced the Mean Time to Respond (MTTR) for SSH brute-force attacks to under 10 seconds.
- ∗ Automated the entire threat mitigation workflow, from initial detection by a custom Wazuh rule to the final IP block executed by a Python SOAR script, eliminating the need for manual intervention.

SoulSync: Matchmaking Application ⬀ — Jan 2025 - May 2025

Flutter, Java, Node.js, MongoDB

- ∗ Programmed a cross-platform mobile app using Flutter for personalized matchmaking based on numerology.
- ∗ Engineered backend with Node.js and Express.js, exposing REST APIs for profile handling and numerology logic.
- ∗ Leveraged MongoDB to store user data and matchmaking results with secure data models.
- ∗ Implemented logic for calculating Life Path Numbers, Angel Numbers, and compatibility scores.

PixelLock: Image Encryption Model ⬀ — Aug 2024 - December 2024

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- ∗ Automated an AES-based image encryption and decryption program in C using SubBytes, MixColumns, ShiftRows, and AddRoundKey.
- ∗ Converts BMP images to grayscale before encryption to improve visual security.

CORE COMPETENCIES

- **Languages:** Java, Python, HTML
- **Databases/ Tools:** MySQL, MongoDB, VScode, Metasploit, Nmap, Wireshark, Burp Suite
- **Development:** JavaScript, Node.js, CSS, Express.js
- **Security Concepts:** Risk Assessment, Audit Understanding (ISO 27001, NIST), Incident Response Lifecycle, Security Policy Awareness
- **Cloud Platforms:** AWS
- **Soft Skills:** Leadership, Adaptability, Teamwork, Problem Solving

ACHIEVEMENTS

- Achieved Top 3% position on TryHackMe platform, practicing cloud misconfigurations, CTF labs, and red/blue team challenges.
- Won the **Bronze Medal** in IBM ICE 2024 project presentation for PixelLock project organized by School of Computer Science, UPES, Dehradun.

CERTIFICATES

- Attended **SSCSDF Conference** organized by UPES.
- Completed **Drone Technology And Applications Bootcamp** organized by NIT Kurukshetra
- Participated in Hackathon organized by CSA, UPES
- Participated in Hackathon organized by CSI, UPES
- Participated in **Myntra HackerRamp** coding event
- Participated in **Adobe GenSolve** Hack-A-Thon

CO-CURRICULAR ACTIVITIES

- * Volunteered in International Conference on Advancements of Cyber Security and Digital Forensics organized by UPES, Dehradun.
- * Volunteered in Virasat organized by ONGC, Dehradun.
- * Social Media Manager for Shuruaat Ek Jyoti Shiksha Ki NGO in Prayagraj.