

AMAN SINGHAL

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EDUCATION

University of Petroleum and Energy Studies

August 2021 - May 2025

Bachelor of Technology in Computer Science - Specialization in CSF; **CGPA: 7.26**

Uttarakhand, India

EXPERIENCE

Bug Hunting

December 2022 – Present

Freelance

- Actively contributed to multiple **high-profile bug bounty programs**, unearthing **critical vulnerabilities** with potential implications for **corporate security**.
- Employed **advanced techniques**, including cache deception coupled with **Cross-Site Scripting (XSS)** methodologies, to ingeniously circumvent **Web Application Firewalls (WAFs)** and **exfiltrate** sensitive data for renowned brands.
- Distinguished track record of discovering and reporting over **15 validated vulnerabilities** across diverse bug bounty programs, showcasing an exceptional grasp of **security vulnerabilities** and a proven history of impactful discoveries.

PROJECTS

1. AntRoote: An Emergency Response Route Planner

- * Spearheaded the development of a dynamic **emergency navigation portal**, showcasing problem-solving skills and proficient programming.
- * Implemented advanced Evolutionary Computing Algorithms, specifically **ACO (Ant Colony Optimization)**, to strategically deploy **pheromones**, visualizing real-time efficient routes for crisis response.

2. Music Generation using LSTM and GRU

- * Developed a **machine learning** project capable of autonomously generating unique piano compositions. The project features an intuitive graphical user interface, allowing users to specify sequence length and music temperature.
- * The utilization of **LSTM and GRU** models significantly facilitated the detection of intricate music patterns and sequences within the music files, resulting in the generation of novel musical compositions. The model demonstrated an impressive **89% accuracy** in producing these music sequences.

3. PromptArt: AI-Powered Image Creation Platform

- * Engineered a robust **MERN Stack** platform, seamlessly integrating the **OpenAI API** to efficiently generate images, highlighting technical prowess.
- * Created a harmonious fusion of **MongoDB, Express.js, React, and Node.js**, ensuring lightning-fast image creation while providing a fluid user interaction experience.

SKILLS

- **Web Application Security:** Cross-Site Scripting (XSS), Cache Deception, Cache Poisoning, Insecure Direct Object References (IDORs), Reentrancy, Integer Overflow and Underflow
- **Programming Languages:** Python, JavaScript, Solidity
- **Skills and Tools:** Data Structures and Algorithms, Web3, Smart Contracts, Nmap, Wireshark, Johntheripper, Burpsuite, Google Dorking, Etterscan, Foundry, Remix, Secureum
- **Soft Skills:** Communication, Team Work, Collaboration

EXTRACURRICULAR

- Invited to conduct **penetration testing** on over **10 private programs**, demonstrating expertise and trust within the cybersecurity community.
- Secured victory in more than **10 medium-level Capture The Flag (CTF)** competitions alongside my team, organized by prestigious entities such as Patriot and Odyssey.
- Achieved a **top-tier ranking**, placing in the **top 4%** of participants on the **TryHackMe platform**.
- Earned a prominent position by ranking **under 400 on CTFLearn**, showcasing a high level of proficiency in cybersecurity challenges.
- Proactively participated in **open-source development**, contributing to multiple projects on platforms like GitHub by enhancing features, fixing bugs, and improving documentation