

# K Harshit

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## Summary

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A detail-oriented Computer Science student passionate about the intersection of **Machine Learning**, **Deep Learning**, and **Cybersecurity**. I have hands-on experience developing advanced **DL models** and secure, scalable software solutions. Seeking a challenging role to apply these skills to solve complex problems.

## Education

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PES University, Karnataka, India  
B.Tech in Computer Science and Engineering  
CGPA: 8.7

2023 – 2027

## Skills

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**Languages:** Python, Java, C, JavaScript  
**Deep Learning & AI:** PyTorch, Hugging Face, Transformers, LangChain, Gemini, LLMs, GANs, XAI, NLP  
**Cybersecurity & Networking:** Computer Networking, Nmap, Socket Programming, JWT, Ethical Hacking  
**Web Development & Database:** React.js, Node.js, MongoDB, FastAPI, Streamlit, Tailwind CSS, ChromaDB  
**Tools & Core Concepts:** Git, Linux, Data Structures & Algorithms, APIs

## Work Experience

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Summer Intern – CCNCS, PES University June 2025 – July 2025  
Developed **XJailGuard**, an explainable framework for detecting advanced **multi-turn, cross-lingual jail-break attacks** on **LLMs**. Authored a research paper on this work, selected for publication at the **ICICC Conference**.

## Projects

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**XJailGuard : AI Safety Framework**  
Developed a secure multilingual AI assistant acting as a safety filtering layer for **LLM** deployment. Engineered to detect and block **prompt injection**, **multilingual attacks**, and **chained jailbreaks** in multi-turn conversations. Integrated an **XAI** module to provide token-level explanations for blocked content, ensuring transparency.  
**Tech Stack:** Python, PyTorch, Hugging Face, Transformers, XAI, FastAPI, Git

**CTI-RAG : CTI Analysis Chatbot**  
Designed a **Retrieval-Augmented Generation (RAG)** system for **Cyber Threat Intelligence (CTI)** analysis. Ingests and indexes CTI data (CVE, MITRE ATT&CK) into a vector database, enabling analysts to extract **actionable, cited intelligence** via a chatbot interface.  
**Tech Stack:** Python, LangChain, Gemini, ChromaDB, Streamlit, SentenceTransformer

**SecureLogger**  
A **cyber deception tool** to flood web server access logs with realistic, fake entries using a **GAN** (Generative Adversarial Network). The goal: **obfuscate true server activity** and frustrate attackers or unauthorized auditors.  
**Tech Stack:** Python, PyTorch, Flask, Watchdog, Numpy, Logging

**SecureSniff**  
A **network analysis tool** that **captures live packets**, generates detailed summaries including protocol breakdowns, source/destination information, and packet metadata. Integrated **Nmap** to perform **real-time scanning** on selected packets for vulnerability assessment. Combined packet inspection with **active network reconnaissance** to provide both passive and active security insights. Built with a focus on performance, usability, and security.  
**Tech Stack:** Python, Socket programming, NMAP

**PlayTogether : Full stack web application** Nov 2024  
Engineered a **full stack platform** for discovering, booking, and organizing sports activities and facilities. Implemented user authentication with **JWT**, venue booking, event management, and player connection features.

**Tech Stack:** React.js, Node.js, Express.js, MongoDB, Tailwind CSS, JWT

## Certifications

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**Cybersecurity** – Basics of red teamings

Learnt about the basics of **ethical hacking** in this course and got a certificate on completion of the course

## Achievements and Extracurricular

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Awarded **Prof. C N R Rao Merit Scholarship** for ranking in the **top 25% SGPA holders** in the CSE department.