

# Rhythm Mundra

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## Summary

Undergrad **IIT Roorkee**(2022-2026). Got All India Rank **4616** in JEE Advanced 2022 and **4133** Jee Mains 2022. Computer Science and software development enthusiast with some experience in Cryptography, low level programming, and software security.

## Work Experience

### Clouddefense.ai

Remote

CLOUD SECURITY RESEARCH INTERN

Sept 2024 - Ongoing

- Conducted in-depth research and analysis to identify and mitigate critical security vulnerabilities in cloud applications and Infrastructure as Code (IaC).
- Contributed to the development and enhancement of advanced security solutions to streamline the detection and remediation of risks, ensuring seamless integration into CI/CD pipelines.
- Collaborated with cross-functional teams to optimize end-to-end security processes.

### Resec Systems

Remote

JUNIOR RESEARCH INTERN

Oct 2023 - Jan 2024

- Created various Challenges based on Cryptography which was targeted to students who wanted to learn security and programming.
- Created detailed writeups and Used AWS Docker to host some of the challenges.

## CTF Profile

I play CTFs(Capture The Flag) almost every weekend with InfoSecIITR (ctftime) which is currently at 2nd position in India and 21st globally. I majorly do cryptography and also made few challenges on Backdoor CTF platform.

2024	<b>1st globally</b> , VishwaCTF 2024	Online
2024	<b>1st globally</b> , JerseyCTF IV	Online
2024	<b>3rd globally</b> , PearlCTF 2024	Online
2024	<b>3rd globally</b> , ShaktiCTF 2024	Online
2023	<b>1st in India, 12th globally</b> , CSAW CTF World Finals, part of team April Worshippers	Online
2024	<b>1st in India, 7th globally</b> , CSAW CTF World Finals	Online
2024	<b>5th globally</b> , Patriot CTF 0224	Online
2024	<b>5th globally</b> , BYUCTF 2024	Online
2023	<b>1st globally</b> , IITB CTF Qualification	Online
2024	<b>Ranked 5th</b> , UMassCTF 2024	Online
2023	<b>Ranked 3rd in world</b> , JADE CTF 2023	Online
2023	<b>Ranked 4th in world</b> , nullcon HackIM CTF Goa 2023	Online

## Projects

	<b>Stellar pods</b> , Created a command-line tool in Go using Cobra to automate CTF challenge deployments.	
Oct 2024	Automated the extraction of CTF challenge files from GitHub based on a configuration YAML file, creation of Docker images, and containerization of the applications. Deployed and managed CTF challenges on Kubernetes, ensuring scalable, efficient, and reliable setups for participants.	InfoSecIITR
Nov 2023	<b>Cryptography basic CTF Challenges</b> , Created a crash course of CTF cryptography challenges designed for a beginner Including topics based on <b>Number Theory</b> , <b>Encoding mechanisms and RSA Algorithm</b> .	InfoSecIITR
Dec 2023	<b>Subtitle Creator</b> , This is an end-to-end automatic speech recognition (ASR) system designed to convert raw audio into transcribed text, generating subtitles. Utilizing the LibriSpeech dataset, the project processes audio features and builds neural network models (including RNNs, CNNs, and bidirectional RNNs) to optimize transcription accuracy.	Vision and language group

## Skills

<b>General :</b>	C++, Python, AWS, GCP, Complexity Analysis, Data Structures, Algorithm Design, GoLang, Linux, Visual Studio, Docker
<b>Security :</b>	pwntools, gdb, pyCryptodome, Symmetric key cryptography, kubectl, Public Key Cryptography, Sagemath
<b>Tools :</b>	Burpsuite, IDA Pro, Ghidra, Wireshark

# Extracurricular Activity

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## InfosecIITR, IIT Roorkee

Core Member

(InfoSecIITR)

Apr 2023 - Present

- Active member and CTF player of InfoSecIITR; conducted lectures and CTFs on Information Security. Explored security domains including Cryptography, Reverse Engineering, and some Web Exploitation.

## BackdoorCTF 2023

Challenge Author

(BackdoorCTF 2023)

16-18 December, 2023

- Created CTF challenges on cryptography, Pyjails, and OSINT for Backdoor CTF, engaged over 1,400 international teams