

UNNATI DIXIT

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EDUCATION

Indian Institute of Technology Hyderabad Master of Technology (Research Assistant), Computer Science	Kandi, Telangana 2021 - 2024
Institute of Engineering and Technology, DAVV Bachelor of Engineering Computer Science	Indore, Madhya Pradesh 2017 - 2021
Vijay Adhunik Higher Secondary School Higher Secondary School Certificate	Chhatarpur, Madhya Pradesh 2015 - 2017
Kendriya Vidyalaya Chhatarpur Secondary School Certificate	Chhatarpur, Madhya Pradesh 2013 - 2015

WORK EXPERIENCE

IIT Hyderabad
M. Tech. Research Assistant 2021 - 2024

- Working on 5G testbed as a core team member.
- Working with NCCS (National Centre for Communication Security) team to design ITSAR (Indian Telecommunication Security Assurance Requirements) documents and scripts for the security requirement in 5G.
- With increasing connecting devices in the 5G core the implementation of Load balancing is necessary. So currently working for the implementation of load balancer in the SMF node of 5G testbed.
- Working on a problem statement which deals with the vulnerability of SMF(Session Management Function) node in 5G testbed. Using HTM (Hierarchical Temporal Memory) learning and encryption based algorithm to solve the problem.
- Worked in the documentation of the 5G Testbed core and MEC (Multi-access Edge Computing).

NSBM- Dishanjali IET Chapter Indore
Volunteer 2018 - 2019

- Worked for the welfare of under privileged students.
- Used to teach Mathematics to Government School students.

PROJECTS

PFCP Protocol *CPP, Socket Programming, Wireshark*

Implementing a protocol in 5G testbed used for the communication between the SMF (Session Management Function) and UPF (User Plane Function) nodes of 5G core.

Firewall *Python, Socket Programming, Wireshark*

Designed a firewall on which we can add or delete any rules. It will allow or block the traffic according to the rules set by the user. Also the firewall is capable to detect DoS attacks.

Chat App *Python, Socket Programming, Wireshark*

A reliable and secure chat application programmed with TCP and TLS protocols. Also designed programs to launch Downgrade and MITM attacks.

Zariya *Python, HTML, Javascript, CSS, Flask, Scikit-learn*

It is an ML application (using CNN) to bridge the communication gap for specially abled .It converts gestures in Sign Language to audio and audio to Sign Language. Achieved an accuracy of 95%.

Swadeshi *Django, Python, PostgreSQL*

An Ecommerce website designed by using Django framework and MySQL as database. It basically deals with the

SKILLS

Programming Languages:	CPP, C, Java, Python
Web Technologies:	HTML, CSS, Bootstrap, Javascript, Node.js, Django
Tools:	Visual Code Studio, Docker, Wireshark, Git, OpenSSL, Postman, Doxygen
Database:	MySQL, PostgreSQL
Courses:	Computer Networks, Operating System, Advanced Data Structures, DBMS, Network Security
Operating System:	Linux, Windows