# Varun Modi

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#### **Education**

#### International Institute of Information Technology, Hyderabad, M. Tech. CSIS

July 2025 - June 2027

- CGPA: ongoing
- Coursework: Computer Science and Information Security

Sardar Vallabhbhai National Institute of Technology, Surat, B. Tech. ECE

December 2021 - July 2025

- CGPA: 7.22
- Coursework: Communication Networks, Ad Hoc Wireless Networks, Wireless Mobile Communication, VLSI Design, Deep Learning, Professional Ethics, Economics and Business Management, Innovation, Incubation and Entrepreneurship.

# **Experience**

## Sardar Vallabhbhai National Institute of Technology, Surat, 6-month Internship

January 2025 - May 2025

- Developed Python Libraries to compute decomposition of complex signals like speech into simpler modes using Adaptive Variational Mode Decomposition (AVMD), Variational Mode Decomposition (VMD) and Empirical Mode Decomposition (EMD).
- Extracted useful features from decomposed signals to feed classifier algorithms to achieve high accuracy emotional classification of input speech signals
- Datasets Used: RAVDESS, EMO\_DB, SAVEE. Classifiers Used: Support Vector Machine, Dense Neural Network.
- Achieved above 90% accuracy in classification.

# **Projects**

## **Machine Learning Based Speech Emotion Recognition**

• 6-month Internship Project

## Password Manager (CySafe)

• Data processing and encryption using Python and Storage using MySQL. Graphical User Interface using Tkinter.

# **Cryptography (Mini Projects)**

• XOR-based Stream Cipher, Columnar Transposition Cipher, Rivest-Shamir-Adleman Algorithm, Shift Cipher, Monoalphabetic Cipher, Playfair Cipher

#### **Skills**

**Communication Networks:** OSI Model, TCP/IP Model, MAC, LAN, Ethernet, IP Addressing, Routing, Wireless Networks, Protocols, Cryptography

Programming and DBMS: Python, MySQL

Leadership and Team Management

#### Certificates

Introduction to Cybersecurity Tools & Cyber Attacks (https://coursera.org/verify/QDN85R7AY8BJ)

Cybersecurity Roles, Processes & Operating System Security (https://coursera.org/verify/UAU2UJSAJMZF)

Compliance Framework & System Administration (https://coursera.org/verify/RKKK22ZQ6GRZ)

#### **Achievements**

- Ranked 81 all-India in PGEE Examinsation.
- Among top 1.5% students All India in JEE (Mains) Examination.
- Successfully navigated complex uncertainties as the class representative.

## Co-curricular

Volunteer, National Service Scheme - SVNIT, Surat

April 2022 - April 2024

• Contributed 240 hours of community service. Managed documentation and finance.

Class Representative, B. Tech. ECE - Batch of 2025

August 2023 - August 2025

Correspondent, Renesa, SVNIT, Surat

February 2022 - January 2023

• Wrote and Edited Articles for the Official Institute Magazine. Managed Financial Records.