# Abhinandan Sharma

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## EDUCATION

 $\bullet$ Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat

Nov 2022 - May 2026

B.Tech in Electrical Engineering — CGPA: 7.65

Relevant Coursework: Machine Learning, Probability and Statistics, Data Structures, Optimization Techniques

# PROJECTS

#### • WhatsApp Chat Analyzer - Interactive Message Insights Tool

 $Python-Pandas-Matplotlib-Streamlit-Data\ Visualization$ 

- Built a Streamlit web app to analyze exported WhatsApp chats, extracting insights from messages, stickers, links, and emojis
- Handled format variations across Android and iOS chat logs, cleaning and processing over 10K+ messages efficiently
- Visualized user activity, top contributors, busiest hours, emoji usage, and word frequency through interactive charts and dashboards

#### • Stock Market Regime Detection via Unsupervised Learning

Unsupervised ML — Time Series — Market Microstructure

- Engineered features (VWAP, volatility, order book imbalance, microprice) from high-frequency data
- Applied PCA & clustering (KMeans, HDBSCAN, GMM) to segment market into behavioral regimes
- Visualized and interpreted clusters (e.g., trending vs. mean-reverting, volatile vs. stable)

#### • Movie Recommender System with Metadata and Trailers

NLP — CountVectorizer — Streamlit — OMDb API

- Developed a content-based recommendation engine using cosine similarity over combined metadata (title, genres, overview, keywords)
- Extracted top 5000 features with CountVectorizer; calculated similarity for 4K+ movies using Scikit-learn
- Built an interactive Streamlit app with IMDb posters and manually curated YouTube trailers; future-ready for collaborative filtering

#### SKILLS

- Programming Languages: Python, C++, C, HTML, CSS
- $\bullet \ \mathbf{ML/DS} \ \mathbf{Tools:} \ \mathbf{Scikit\text{-}learn}, \ \mathbf{TensorFlow}, \ \mathbf{XGBoost}, \ \mathbf{PCA}, \ \mathbf{Clustering}, \ \mathbf{Statsmodels}, \ \mathbf{Feature} \ \mathbf{Engineering}$
- Visualization & Web Tools: Power BI, Excel, Matplotlib, Streamlit, Selenium, BeautifulSoup, Requests, MySQL
- Soft Skills: Communication, Teamwork, Time Management

#### CERTIFICATIONS

- Machine Learning Stanford University (Coursera)
- Business Analytics (Industrial Training) Graduvation

### Leadership & Responsibilities

- Joint Treasurer Centre for Human Resource Development
- Head Publicity Committee, Sparsh'25 (Cultural Fest)

#### Interests

- Exploring Python frameworks and developing innovative programs
- Passionate about ML applications and AI-driven products
- Curious about Gen-AI, LLMs, and real-time AI decision systems