

Om Gosavi

Pune, Maharashtra | +91 8830202810 | omgosavi2023.comp@mmcoe.edu.in

LinkedIn: [Om Gosavi](#) | [LinkedIn](#) | GitHub: [OMG2Git](#)

PROFESSIONAL SUMMARY

B.Tech student at SPPU University with a proven track record of building 5 production-grade AI/ML systems from concept to deployment. Specialized in full-stack machine learning with expertise in NLP, computer vision, time-series forecasting, and real-time systems. Demonstrated ability to design, implement, and deploy complex ML pipelines at scale using Python, TensorFlow, and cloud infrastructure. Strong foundation in computer science fundamentals combined with practical experience deploying ML models to end users.

Core Strengths: Full-Stack ML Deployment | Natural Language Processing | Computer Vision | Time-Series Forecasting | Deep Learning (CNN, LSTM) | Flask/FastAPI | React Integration | Hugging Face Spaces

EDUCATION

Bachelor of Technology (B.Tech) in Computer Engineering (3 rd Year) Savitribai Phule Pune University, Pune.

1 st year CGPA: 10

2 nd year CGPA: 9.65

Relevant Coursework: Advanced Algorithms | Data Structures | Database Management Systems | Operating Systems | Theory of Computation | Linear Algebra | Statistics & Probability | Computer Networks | Object-Oriented Design

TECHNICAL SKILLS

Programming Languages: Python | JavaScript/TypeScript | C++ | SQL |

ML & AI Frameworks: TensorFlow/Keras | Scikit-learn | PyTorch | NLTK | spaCy | Hugging Face Transformers | OpenCV

Data Science & NLP: NumPy | Pandas | Scikit-learn | TF-IDF Vectorization | Text Classification | Sentiment Analysis | Feature Engineering | Exploratory Data Analysis (EDA)

Deep Learning: Convolutional Neural Networks (CNN) | Long Short-Term Memory (LSTM) | Model Evaluation & Metrics

Backend & APIs: Flask | FastAPI | Express.js | Node.js | REST API Design

Frontend & Deployment: React | Framer-motion | Next.js | Vercel | MongoDB

Development Tools: Git/GitHub | Google Colab | Streamlit | VS Code

MACHINE LEARNING PROJECTS

1. Real-Time Fake News Detection Web Application

AI system detecting article credibility with explainable predictions and real-time scoring. Built comprehensive NLP preprocessing pipeline: tokenization, stop-word removal, lemmatization, and TF-IDF vectorization. Trained Logistic Regression classifier on balanced dataset achieving **94%+ accuracy** and **92% precision** on news classification.

Deployment: Flask API on Hugging Face Spaces | React frontend on Vercel | Live demo:

ML Concepts: Text classification, supervised learning, TF-IDF, logistic regression, model explainability, API design

2. AI-Powered Resume Screener & Applicant Tracking System

Enterprise-grade B2B tool automating resume screening and candidate ranking for large-scale hiring workflows. Designed intelligent skill extraction algorithm parsing job descriptions to identify required competencies. Implemented TF-IDF + Cosine Similarity matching achieving **94%+ accuracy** in resume-to-JD alignment detection.

Deployment: Flask API on Hugging Face Spaces | React dashboard on Vercel | Live demo:

ML Concepts: NLP, information retrieval, similarity matching, skill extraction, text preprocessing, ranking algorithms

3. Smart Traffic Congestion Forecaster with Live Route Predictions

Real-time traffic prediction system using deep learning for urban mobility optimization across multiple junctions. Built LSTM-based time-series neural network trained on 2+ years of historical traffic data. Engineered 20+ temporal features capturing hourly, daily, and seasonal traffic patterns. Implemented multi-junction prediction system supporting 4+ simultaneous traffic monitoring.

Deployment: FastAPI backend on Hugging Face Spaces | React UI | Live demo:

ML Concepts: Time-series forecasting, LSTM networks, temporal feature engineering, neural network optimization

4. AI Mental Health Support Chatbot with Real-Time Conversations

24/7 conversational AI platform providing empathetic mental health support with crisis detection capabilities. Developed multi-class intent classifier (8+ emotion categories) using supervised learning achieving **83.70% accuracy**. Implemented sentiment analysis engine detecting emotional intensity and urgency levels. Built crisis detection system identifying high-risk keywords and triggering immediate support resources.

Deployment: Flask API on Hugging Face Spaces | Frontend on Vercel | Live demo:

ML Concepts: Intent classification, sentiment analysis, conversational AI, real-time processing, text understanding, crisis detection

5. Real-Time Sign Language Recognition & Translation System

Computer vision system recognizing American Sign Language (ASL) gestures and translating to text in real time. Trained Convolutional Neural Network (CNN) classifier on sign language dataset with **25 gesture classes** and **98.93% validation accuracy**. Implemented real-time video frame capture and preprocessing using OpenCV maintaining 30 FPS processing speed. Engineered image normalization pipeline (resizing, grayscale conversion, edge detection) optimizing for CNN inference.

Deployment: FastAPI backend on Hugging Face Spaces | React Frontend on Vercel | Live demo:

ML Concepts: Computer vision, CNN architecture, image preprocessing, real-time inference, OpenCV, temporal processing

TECHNICAL ACHIEVEMENTS & ACCOMPLISHMENTS

1. SIH2025-Internal Hackathon MMCOE, Karvenagar
 - Secured 1st Position in whole college + Special Industry prize
2. SIH2024-Internal Hackathon MMCOE, Karvenagar
 - Secured 2nd Position in whole college
3. SIH2023-Internal Hackathon MMCOE, Karvenagar
 - Nominated under Top 30 Teams
4. IEEE Techsangam 2025, National level Hackathon, MIT
 - Top 10 Finalist

5. UDAAN 2K24 MMCOE, Karvenagar
 - Secured 2nd Position in Paper Presentation
 6. Project Base Learning Competition MMCOE, Karvenagar
 - Secured Best Project Award in the panel
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Soft Skills

1. Eager Learner and Adaptable
2. Hard Worker and Attention to Detail
3. Problem Solving & Execution