

NAYAN NAKUM

AI Engineer | Generative AI | Machine Learning | Enterprise AI

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PROFESSIONAL SUMMARY

AI Engineer with a B.Sc. in Computer Science & IT (CGPA 9.13), focused on building practical Generative AI and machine learning systems. Experienced in developing LLM-powered automation pipelines, AI agents, and RAG-based applications using Python, FastAPI, LangChain, and LangGraph, alongside classical ML systems built with TensorFlow and scikit-learn. Currently developing an enterprise AI platform for mining compliance, combining document intelligence with workflow automation to support regulatory decision-making. Comfortable across the full ML lifecycle, from data annotation through model training to production deployment, with a growing focus on enterprise-grade Generative AI applications.

TECHNICAL SKILLS

AI & Machine Learning: Generative AI, LLMs, AI Agents, RAG, LangChain, LangGraph, Prompt Engineering, TensorFlow, Keras, scikit-learn

Programming Languages: Python, SQL, HTML/CSS

Data & Signal Processing: NumPy, Pandas, Matplotlib, OpenCV, Librosa, NLTK

Backend & Cloud: FastAPI, REST APIs, AWS (S3, EC2)

Databases: MongoDB, MySQL

Tools: Git, GitHub, VS Code, Jupyter, Google Colab

PROFESSIONAL EXPERIENCE

Machine Learning Intern | *Algodealer.ai*

Jan 2026 – Mar 2026 | Remote

- Applied supervised learning techniques to historical market price data to help design and refine automated trading strategies.
- Built and optimized backend features in Python, MySQL, and MongoDB, supporting reliable data storage and retrieval for trading models.
- Collaborated with the engineering team on end-to-end development of financial models and data-driven trading tools.

Data Annotation Intern | *Sahana System Limited*

Nov 2025 – Feb 2026 | On-site / Remote

- Annotated and preprocessed data for large-scale AI projects, following labeling guidelines to maintain consistency across the dataset.
- Worked with the technical team to identify and resolve bottlenecks in the data pipeline, improving throughput for downstream ML workflows.

AI/ML Intern | *Elevate Labs*

Jun 2025 – Jul 2025 | Remote

- Designed and trained classification models using scikit-learn and TensorFlow for assigned internship projects.
- Built model-evaluation visualizations to help the team compare iterations and identify underperforming segments.
- Participated in code reviews and performance testing, incorporating peer feedback into subsequent model revisions.

PROJECTS

AI Enterprise Compliance Platform (*In Development*)

Problem: Mining companies manage complex, document-heavy compliance and regulatory workflows that are largely manual and slow.

Solution: Developing an AI-powered platform that simplifies mining compliance and regulatory workflows through intelligent document analysis, enterprise automation, and AI-assisted decision support.

Technologies: Python · FastAPI · Generative AI · LLMs · AI Agents · RAG

Highlights: LLM-based document analysis • Retrieval-Augmented Generation • AI agent-driven workflow automation • AI-assisted decision support

Algorithmic Trading Bot & Strategy Development

Problem: Manual strategy execution is slow and prone to inconsistent risk management.

Solution: Built an automated trading system integrating the Zerodha Kite API for real-time market data ingestion and order execution on the Indian stock market.

Technologies: Python · Zerodha Kite API · Pandas · NumPy · TA-Lib · SQL

Highlights: Real-time market data ingestion • EMA/RSI/VWAP/Supertrend/ATR-based strategies for TCS, Wipro, and BankNifty options • Automated risk controls (stop-loss, trailing stop-loss, position sizing) • Trade logging and portfolio tracking

GitHub: <https://github.com/NayanNakum19/BankNifty-Algo>

Telegram AI Task Management Bot

Problem: Teams manually convert conversations and voice notes into structured tasks, which is slow and inconsistent.

Solution: Built an AI-powered Telegram bot that converts text and voice messages into structured ClickUp tasks using an LLM pipeline.

Technologies: Python · FastAPI · Telegram Bot API · Faster-Whisper · Groq Llama 3.3 70B · ClickUp API · HTTPX

Highlights: Voice-to-text via Faster-Whisper • LLM-based task extraction (name, description, priority, status, assignee) • Automatic ClickUp task creation with validation • Modular, webhook-based architecture

GitHub: <https://github.com/NayanNakum19/telibot>

Human Emotion Detection from Voice

Problem: Understanding emotional tone from speech typically requires manual review, which doesn't scale.

Solution: Built a speech emotion recognition system on the RAVDESS dataset using audio feature engineering and deep learning.

Technologies: Python · TensorFlow · scikit-learn · Librosa · NumPy · Pandas

Highlights: MFCC, Chroma, and Mel Spectrogram feature extraction • CNN vs. SVM comparison across 8 emotion categories • Real-time prediction pipeline for live voice input

GitHub: https://github.com/NayanNakum19/emotion_detection

Music Genre Classification

Problem: Manually tagging music genres is time-consuming and inconsistent across large libraries.

Solution: Converted the GTZAN dataset into spectrograms and trained a CNN classifier for automated genre prediction.

Technologies: Python · TensorFlow/Keras · Librosa

Highlights: Spectrogram-based CNN input pipeline • 90%+ classification accuracy • Deployed as a CLI-based prediction tool

GitHub: https://github.com/NayanNakum19/Music_genre

Jarvis AI Virtual Assistant

Problem: Everyday productivity tasks often require switching between multiple apps and manual input.

Solution: Built a voice-controlled virtual assistant that performs productivity tasks through natural-language voice commands.

Technologies: Python · SpeechRecognition · pyttsx3 · NLP · OpenAI API · REST APIs

Highlights: Speech recognition and text-to-speech • Weather lookups, web search, reminders, and scheduling in one modular app • NLP-based intent recognition and error handling

EDUCATION

B.Sc. in Computer Science & Information Technology

2022 – 2025

Silver Oak University, Ahmedabad, Gujarat — CGPA: 9.13

Higher Secondary Education (Science)

2021 – 2022

Belur Vidhyalaya, Gujarat Board, Mahuva, Gujarat — 78.30%

Secondary School Education

2019 – 2020

Samarth International School, Gujarat Board, Junagadh, Gujarat — 67.50%

LINKS

LinkedIn: [linkedin.com/in/nayan-nakum-70409a31b](https://www.linkedin.com/in/nayan-nakum-70409a31b)

GitHub: github.com/NayanNakum19