

# Jay Viramgami

Aspiring AI/ML Engineer

 +91 816 091 7553 |  viramgamijay@gmail.com |  jaykings123.github.io |  Thaltej, Ahmedabad |  linkedin.com/in/jay-viramgami |  github.com/Jaykings123

## Professional Summary

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AI/ML engineering student at LD College of Engineering with expertise in deep learning, computer vision, and NLP. Conducted comprehensive evaluation of 10+ NLP models across 3 datasets (CNN/DailyMail, WikiSum, XSum), processing 1,800 documents and achieving best-in-class ROUGE-1 scores of 0.559. Experienced in creating automated AI workflows using n8n for intelligent chatbots, research assistants, and financial analysis systems. Skilled in integrating multiple AI services (Claude, GPT-4 Vision, RAG pipelines) and deploying cross-platform solutions. Passionate about solving real-world problems through innovative AI automation and scalable machine learning solutions.

## Technical Skills

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- **Programming Languages:** Python, Java, SQL
- **AI/ML Frameworks:** TensorFlow, PyTorch, Scikit-learn, Keras, OpenCV
- **Key Concepts:** Deep Learning (CNNs, Transformers, RNNs), Computer Vision (Image Classification, Object Detection, Facial Emotion Detection), NLP (Sentiment Analysis, Summarization, RAG), Model Optimization, Deployment, Vector Databases, API Integration
- **Automation & Integration:** Workflow Automation, API Development, Webhook Integration, Data Pipeline Design, Real-time Processing, Multi-platform Integration
- **Tools & Platforms:** Git, GitHub, Jupyter Notebook, MySQL, Google Cloud Platform, n8n, OpenAI, Google Gemini, Pinecone, Telegram API, Discord API, Gmail API, Google Calendar API, arXiv API

## Education

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**LD College of Engineering**, Bachelor of Engineering in Artificial Intelligence and Machine Learning

- CGPA: 7.91/10.0
- Coursework: Deep Learning, Neural Networks, Computer Vision, DBMS, Data Structures and Algorithms

## Experience

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**Technical Intern**, Suvidha Foundation

- Implemented 10+ NLP models (PRIMERA, BART, PEGASUS, T5, Longformer, Graph-based NN) for multi-document summarization
- Fine-tuned TG-MultiSum and Absformer on CNN/Daily Mail dataset with structured pipelines
- Evaluated models using ROUGE-1/2/L metrics; created benchmarking reports and visualizations
- Optimized training on GPU/TPU, maintained clean reproducible code, and collaborated via GitHub
- Contributed to AI research with measurable results, supporting the foundation's technical initiatives

## Certifications and Courses

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**Deep Learning Specialization**, Coursera - DeepLearning.AI

- Mastered CNNs, RNNs, and Transformers
- Achieved 95%+ accuracy on benchmark dataset project

**Advanced Learning Algorithms**, Coursera - Andrew Ng

- Explored supervised and unsupervised algorithms
- Applied hyperparameter tuning & model selection

**Artificial Intelligence with Python**, Microsoft

- Developed foundational Python skills for ML
- Applied AI concepts in a real-world project

## Projects

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### **Facial Emotion Detection with CNN**

- Achieved 71% accuracy on FER-2013 dataset with a custom CNN
- Optimized for real-time performance (<40ms latency) using TensorFlow & OpenCV
- Tools: Python, TensorFlow, Keras, OpenCV, Scikit-learn

### **AI Image Generation with Stable Diffusion**

- Built a modern web application using Streamlit and Hugging Face's diffusers library for text-to-image generation
- Implemented real-time image generation with customizable parameters (inference steps, guidance scale)
- Added cross-platform support for CPU, CUDA (NVIDIA), and Apple Silicon (MPS) with memory optimization
- Created user-friendly interface with built-in error handling and validation features
- Tools: Python, Streamlit, PyTorch, Hugging Face Transformers, Diffusers

### **Personal Portfolio Website**

- Showcased 5+ AI/ML projects and skills in an accessible online portfolio
- Built with responsive UI/UX using HTML, CSS, JavaScript

### **RAG Pipeline and Chatbot**

- Built an intelligent chatbot using Retrieval-Augmented Generation (RAG) pipeline with n8n automation
- Integrated multiple AI services for enhanced question-answering capabilities and real-time responses
- Implemented automated workflow triggers and data processing for seamless user interactions

### **AI Research Assistant**

- Developed an automated research assistant using n8n workflows to streamline information gathering
- Integrated AI services for intelligent data analysis, summarization, and research insights
- Created automated triggers for research tasks and data processing workflows

### **Stock Analysis Assistant with Telegram, Claude & GPT-4 Vision**

- Built an automated stock analysis system integrating Telegram, Claude AI, and GPT-4 Vision
- Implemented real-time market data processing and AI-powered financial insights
- Created automated workflows for data collection, analysis, and notification delivery

### **Angie, Personal AI Assistant with Telegram Voice and Text**

- Developed a comprehensive personal AI assistant with voice and text capabilities via Telegram
- Integrated multiple AI services for natural language processing and voice recognition
- Built automated workflows for task management, reminders, and intelligent responses