AVI DEDANIA

work.avidedania@gmail.com | +91 9054880152 | LinkedIn | GitHub | Ahmedabad, India

SUMMARY

AI/ML Engineer with practical expertise in real-time systems and process optimization, with a focus on RAG-based applications, intelligent automation, and voice-enabled AI agents. competent in creating and implementing AI solutions, including edge deployment on Raspberry Pi and Luckfox, utilizing TensorFlow, Keras, OpenCV, MediaPipe, TFLite, LangChain, and Streamlit. knowledgeable about creating business automation interfaces, management dashboards, and scalable AI pipelines utilizing platforms like n8n, Vapi, and Omni Dimension. enthusiastic about utilizing LLMs, generative AI, and AI-assisted development (also known as "Vibe Coding") to transform research-driven prototypes into production-ready AI systems in order to promote innovation and operational effectiveness.

EDUCATION

Batchelor of Engineering in Computer Engineering 2022-2025

SAL College of Engineering Ahmedabad, Gujarat, India

Diploma in Information Technology (IT) 2019-2022

Government Polytechnic Rajkot, Gujarat, India

EXPERIENCE

Neno Technology (AI NANO INNOVATIONS PVT LTD) **Sept 2025 – Present**

AI Automation Intern

- Implemented AI-driven customer engagement automations (quotation sending, cold outreach, social media posting), significantly improving response speed, lead nurturing, and client conversion for business domains.
- Developed voice-enabled management dashboards integrating AI task automation, enabling real-time decision support and improving operational efficiency.
- Automated business operations across management, communication, and scheduling, using AI-powered workflows (n8n, voice agents, WhatsApp & LinkedIn automations), reducing manual workload and improving execution efficiency.
- Built customized AI assistant and analytical automation tools for business & startup evaluation.

Data Vidwan **Feb 2025 – April 2025**

AI/ML Intern

- Trained and deployed MobileNetV2 models for image classification with over 90% accuracy.
- Converted deep learning models to TensorFlow Lite for real-time inference on Raspberry Pi.
- Built a real-time hand gesture recognition system using OpenCV and MediaPipe, achieving 95% prediction accuracy.
- Created interactive ML apps using Streamlit and Jupyter Notebook for intuitive user interfaces.

SKILLS

- **Languages:** Python, C, C++, HTML, CSS, PHP
- **Libraries/Frameworks:** TensorFlow, Keras, OpenCV, scikit-learn, LangChan, MediaPipe, NumPy, Pandas, Streamlit
- **Concepts:** CNN, Transfer Learning, Image Classification, Object Detection, Face Recognition, Model Optimization, NLP, Generative AI (GenAI), Large Language Models (LLMs), Retrieval-Augmented Generation (RAG)
- **Tools/Platforms:** Jupyter Notebook, Git, Raspberry Pi, Arduino, Edge Impulse, Teachable Machine, N8N, AI-assisted development
- **Soft Skills:** Teamwork, Leadership, Communication, Problem-Solving

PROJECTS

AI-Powered Garbage Classification System with IoT Implementation

- Designed a real-time waste classification system using a MobileNetV2 model trained on 14,000 labeled images and optimized with TensorFlow Lite.
- Deployed the solution on Raspberry Pi with OpenCV-based video frame processing and servo motor control for object segregation.
- Technologies: Python, TensorFlow, Keras, TensorFlow Lite, OpenCV, Flask, IP Webcam, Raspberry Pi, Arduino Leonardo, SG90 Servo

Smart Reach: Covers scraping, personalize outreach, and response tracking

- Built an end-to-end B2B lead generation workflow in n8n that ingests industry filters via webhook, queries Apollo API for decision-makers, enriches contact data, and stores structured leads in Supabase.
- Implemented automated email reply monitoring with Gmail and Supabase, using GPT-4o-mini to classify incoming responses into priority levels (High/Medium/Low) based on urgency and business impact, then persisting results back to lead records.
- Designed a timezone-aware follow-up engine that detects local working hours, schedules follow-ups during business hours, and prevents duplicate sends through status tracking.
- Technologies: n8n, Apollo API, Supabase, Gmail API, GPT-4o-mini, Google Maps Geocoding, Timezone APIs, Python.

ScriptToScreen - Clearly communicates the function

- Accepts scripts via webhook, generates HD avatar videos with HeyGen API
- Pre-configured avatars and AI voices with customizable speed using N8N.
- Benefit: Automates video creation for marketing, training, and sales at scale

WhatsApp Bulk Message Automation

- Built an end-to-end WhatsApp bulk messaging workflow in n8n that ingests contact lists from Google Sheets, integrates with WhatsApp Business API, and orchestrates batch delivery of personalized messages to thousands of recipients with dynamic variable substitutions.
- Implemented intelligent message scheduling with rate-limiting, delivery status tracking, and conditional retry logic to handle failures, invalid numbers, and opted-out contacts while ensuring compliance with WhatsApp API constraints.
- Designed a campaign analytics pipeline that persists delivery metrics and engagement data back to Google Sheets, enabling real-time performance tracking, contact segmentation by outcome, and A/B testing of message templates.
- Technologies: n8n, WhatsApp Business API, Google Sheets API, Webhooks, Rate-limiting, Status tracking, JSON parsing.

Live Camera Hand Gesture Detection for Interactive Drawing

- Developed a touchless drawing app using camera input to track index finger position for real-time drawing and erasing.
- Incorporated face and hand mesh detection to improve gesture accuracy and responsiveness.
- Technologies: Python, OpenCV, MediaPipe, NumPy

RedditToLinkedIn: AI Agent News Automation Platform

- Intelligent Filtering — AI identifies only high-quality, relevant Reddit posts automatically
- Smart Content Conversion — Transforms Reddit discussions into polished LinkedIn content with hooks and hashtags in seconds
- Automated Distribution — Delivers ready-to-post content to your inbox daily with zero manual effort
- Technologies: n8n, Reddit API, OpenAI GPT-4o, Telegram API, OAuth 2.0

Bhagavad Gita Conversational AI Assistant

- Created a conversational AI chatbot with Streamlit that uses the Hugging Face Mistral-7B, LangChain, and FAISS vector database to provide answers based on scripture and semantic search.
- In order to provide precise multi-turn Q&A with source references, conversational memory, embeddings, text preprocessing, and PDF ingestion were implemented.
- Technologies: Python, Streamlit, LangChain, Hugging Face Transformers, FAISS, LLMs

AI Powered Voice-Based RAG Agent

- Voice-powered RAG system that processes PDF documents into a vector database (Qdrant) and answers questions using voice input/output with OpenAI's GPT-4o and TTS models.
- Streamlit web app that lets users upload PDFs, ask questions via voice recording or text input, and receive both text and audio responses generated from semantically searched document chunks.
- End-to-end voice assistant that transcribes voice queries with Whisper, retrieves relevant document sections using embeddings, generates answers with AI agents, and converts responses to natural speech using OpenAI's voice synthesis.
- **Technologies:** Streamlit , Qdrant, FastEmbed embeddings, LangChain , OpenAI (GPT-4o, Whisper, TTS), Python.

Pose-Controlled Game using MediaPipe & PyAutoGUI

- Built a webcam-based interface for gesture-controlled gaming using real-time pose detection.

- Tracked shoulder movement with MediaPipe and simulated keyboard inputs using PyAutoGUI to control game actions.
- Technologies: Python, OpenCV, MediaPipe, PyAutoGUI

Real-Time Face Recognition Attendance System
- Implemented a face recognition system using webcam stream, MTCNN for detection, and FaceNet embeddings for identification.
- Logged attendance based on cosine similarity comparison with a known face database in real-time.
- Technologies: Python, OpenCV, MTCNN, FaceNet, NumPy, Pandas, scikit-learn

Smart Google Sheet Change Tracker
- Engineered a Python-based solution to detect and respond to changes in Google Sheets with automated email alerts.
- Used threading for background monitoring and Gmail SMTP to deliver real-time structured notifications.
- Technologies: Python, Pandas, smtplib, threading, Gmail SMTP

NLP-Based Text Summarizer with spaCy
- Created a tool to summarize paragraphs by scoring and selecting top-ranked sentences based on word frequency.
- Applied NLP techniques like stopword removal and frequency analysis using spaCy for effective summarization.
- Technologies: Python, spaCy, NLP, TextRank (manual scoring)

Programming Funda: Learning Platform with MCQs
- Built a web-based platform for programming tutorials and MCQ-based exams with profile and score management.
- Enabled admin control to manage users, track results, and maintain question sets.
- Technologies: HTML, CSS, PHP, MySQL

RESEARCH PUBLICATIONS

AI-Powered Garbage Classification System with IoT Implementation
International Journal of Innovative Research in Engineering & Multidisciplinary Physical Sciences
- Published in IJIRMPS, Volume 13, Issue 2 (Mar–Apr 2025).
- Proposed an AI-based waste classification system using MobileNetV2 and TensorFlow Lite.
- Deployed on Raspberry Pi with OpenCV and servo motor control for real-time sorting.
- Focused on lightweight edge deployment and IoT integration.

VOLUNTEERING

Google Developer Student Club - SAL Education
Management Lead – GDSC

Syntaxium Coding Club - SAL Education Campus
Management Lead

30th National Children's Science Congress
Volunteer