# nshika Arya

#### Noida, Uttar Pradesh

#### SUMMARY

AI/ML Engineer with hands-on expertise in multi-modal, deep learning (CV, NLP, audio), and robust backend orchestration using Python, TensorFlow, and PostgreSQL. Passionate about building AI-driven solutions, optimizing models, and solving real-world problems through data science and automation.

#### **EDUCATION**

Amity University, Noida

2023 - 2026

Bachelor of Computer Applications

Noida, Uttar Pradesh

KMGGP College, Greater Noida

2019 - 2022

Diploma in Computer Science and Engg.

Greater Noida, Uttar Pradesh

#### EXPERIENCE

AI/ML Engineer

June 2024 - June 2025

 $Tamar\ Software$ 

Noida, UP

- \* Developed and implemented machine learning and deep learning models leveraging computer vision, NLP, and LLMs with Python, TensorFlow, OpenCV, and LangChain.
- Designed and optimized deep learning pipelines, including data preprocessing, feature engineering, and hyperparameter tuning.
- Managed data annotation workflows, database orchestration with PostgreSQL, and built REST APIs using Flask for seamless deployment.
- \* Performed EDA and created visualizations with Pandas, NumPy, Seaborn, and Matplotlib; collaborated via Git/GitHub for version control.

### **PROJECT**

# Infant Behavior Analysis System | Python, OpenCV, TensorFlow, MediaPipe

- \* Built a multi-modal emotion and pose detection system for infants with 76% accuracy, using Python, OpenCV, TensorFlow, Librosa, and dlib.
- Implemented facial emotion recognition, pose estimation, integrating early fusion for robust predictions.
- \* Utilized pre-trained deep learning models and managed pose classifiers with joblib for real-time posture and emotion classification.
- \* Deployed via Flask to deliver actionable insights to caretakers, detecting infant states like hunger, discomfort, and sleepiness.

# Telemedicine Virtual Agent | Python, Flask, LLMs, PostgreSQL, LangChain

- · Developed a multi-modal AI healthcare system enabling patients to describe symptoms via text, voice, or images, with diagnosis powered by LangChain, Roboflow, and real-time web search.
- Integrated voice input/output (SpeechRecognition, pyttsx3) and image-based disease detection using multiple Roboflow ML models for skin, dental, hair, and eye conditions.
- · Implemented critical case escalation by auto-generating Jitsi meet links and sending Twilio SMS to patients and doctors.
- · Built a robust backend with PostgreSQL for patient history and Python-based orchestration, ensuring a seamless, intelligent telemedicine experience.

## TECHNICAL SKILLS

- · Programming Languages & Databases: Python, SQL, PostgreSQL
- · ML/DL Frameworks: TensorFlow, Pytorch, Keras, Scikit-Learn
- · Computer Vision: OpenCV, YOLO, MediaPipe, Image Segmentation, PaddleOCR
- · NLP & LLMs: OpenAI, Mistral, LangChain, DuckDuckGo Search, SerpAPI
- · Data Analysis & Visualization: Pandas, NumPy, Seaborn, Matplotlib
- · Tools & Platforms: Git, GitHub, Jupyter Notebook, CVAT, Flask, Django
- · Methodologies: Supervised/Unsupervised Learning, CNN, ResNet, Data Preprocessing