Harsharaj Rajaselvam

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Summary

Dedicated Artificial Intelligence and Data Science engineer with 1+ years of work experience, driven by a passion for problem-solving and equipped with a strong foundation in programming, algorithms, and machine learning. Eager to apply skills to real-world challenges and contribute to innovative, impactful projects, while staying committed to continuous learning and emerging technologies.

Work Experience

DataReveal AI **Chennai, Tamil Nadu**

AI Developer Intern *Jan 2025 – Aug 2025*

- Automated extraction and processing of candidate data from diverse sources, raising ATS accuracy and reducing manual entry time, by embedding Large Language Models (LLMs) for intelligent parsing and information retrieval.
- Enhanced system performance and UX by crafting responsive, cross-platform interfaces with React.js, Tailwind CSS, and Redux Toolkit; linked real-time APIs, modularized components, and streamlined state management.

Mobius Knowledge Services **Chennai, Tamil Nadu**

AI/ML Intern *May 2024 – Dec 2024*

- Increased retrieval precision for transcripts and financial reports by designing an advanced RAG pipeline, leveraging a coder agent powered by GPT-4o to produce contextually accurate content chunks.
- Developed a CAD/blueprint query-answering platform with a Streamlit-based conversational UI, integrating GPT-4o for refined prompt handling, persistent chat storage, and automated PDF chart-to-dataframe conversion, reducing manual data extraction time

Education

Shiv Nadar University Chennai **Chennai, Tamil Nadu**

B.Tech Artificial Intelligence and Data Science, GPA: 8.4/10 *2021–2025*

Skills

- **Programming Languages:** Python, C, Java, HTML/CSS, JavaScript, React JS, Tailwind CSS, Redux Toolkit
- **Frameworks & Libraries:** RAG, LangChain, Keras, Pandas, FastAPI, Flask, OpenCV, Mediapipe, YOLO
- **Database Management:** MySQL, SQLite, MongoDB
- **Version Control:** Git, GitHub
- **Others:** Figma, Blender, Audacity

Projects

- **Skin lesion segmentation for dermoscopy images**
  - Achieved a Dice Similarity Coefficient of 90.28% on the ISIC2018 dataset by designing a Swin-UNet-based deep learning model for skin lesion segmentation. Combined a Swin Transformer backbone for global context with a U-Net decoder for local feature extraction, using dynamic attention mechanisms to fuse texture and structural information, and enriched embeddings to enhance multi-scale representations.
- **Real-Time Virtual Assistant with Multimodal LLM Integration**
  - Built a low-latency AI assistant supporting multimodal interactions by combining Faster-Whisper with SpeechRecognition for transcription, Gemini API for webcam-based visual reasoning, and LLaMA 3.2 via Ollama for dialogue control and tool execution. Delivered natural offline TTS responses for uninterrupted communication.
  - Developed and deployed the frontend (React.js, Tailwind CSS) on GitHub Pages, and containerized the backend (FastAPI), publishing the image to Docker Hub.
  - Published a reusable hybrid STT Python package on PyPI to extend transcription workflows.