# Harsharaj Rajaselvam

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in harsharaj

• harsha-2703

Portfolio

# 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**

#### Mobius Knowledge Services

Chennai, Tamil Nadu

Al Developer

Sep 2025 - Present

O Led the automation of RFP (Request for Proposal) classification using the Retrieval-Augmented Generation (RAG) method with Large Language Models (LLMs). Categorized RFPs based on predefined keyword sets, significantly reducing manual review time and enhancing overall response accuracy.

DataReveal AI Chennai, Tamil Nadu

Al Developer Intern

Jan 2025 - Aug 2025

- O 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.
- O 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

- O Increased retrieval precision for transcripts and financial reports by designing an advanced RAG pipeline, leveraging a coder agent powered by GPT-40 to produce contextually accurate content chunks.
- O Developed a CAD/blueprint query-answering platform with a Streamlit-based conversational UI, integrating GPT-40 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

o Programming Languages: Python, C, Java, HTML/CSS, JavaScript, React JS, Tailwind CSS, Redux Toolkit

o Frameworks & Libraries: LangChain, Keras, Pandas, FastAPI, OpenCV, Mediapipe, YOLO

O 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 using a Swin-UNet model.
- Proposed novel attention-based modules for fusion of structural and textural features, enhancing the combination of a Swin Transformer backbone (global context) with a U-Net decoder (local feature extraction).

## • Real-Time Virtual Assistant with Multimodal LLM Integration

- Built a low-latency AI assistant supporting multimodal interactions (speech, vision, text) with Faster-Whisper STT, Gemini API for visual reasoning, and LLaMA 3.2 for dialogue control.

- Delivered natural offline TTS responses, deployed a React/Tailwind frontend on GitHub Pages, and containerized the FastAPI backend for distribution via Docker Hub.
- Published a reusable hybrid STT Python package on PyPI to extend transcription workflows.

#### Al-Powered Detective RPG

- Designed a narrative-driven RPG where players solve cases through suspect interrogation and puzzle-solving. Created intelligent NPCs by integrating Gemma3 (via Ollama) with scripted dialogue, combining LLM-based reasoning with pre-written story flow.
- Applied DistilBERT embeddings to align free-form player input with scripted dialogue, ensuring natural and engaging conversation.
- Distributed as a standalone Windows .exe for easy installation and playability.

## **Certifications**

- OpenCV Bootcamp | OpenCV University
- Introduction to Large Language Models | Simplilearn
- Data Science with R programming | Simplilearn
- Blockchain and its Applications | NPTEL

# Languages

• English [Fluent]

• French [Basic] - A1

• Hindi [Proficient]

• Tamil [Native]