

Manikandan Meenakshi Sundaram

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Education

Northeastern University

Master's in Data Analytics. **3.7/4.0**

Sep 2023 – Dec 2025

Boston, MA

S A Engineering College

Bachelor's in Computer Science and Engineering. **8.07/10**

Aug 2019 – May 2023

Chennai, Tamil Nadu

Experience

Crewasis AI | Data Scientist Intern | New York, NY | Jan 2025 – Jun 2025

- Designed and deployed a **video analysis pipeline at scale** using YOLOv3 and ORB features, integrating AWS S3 for large-scale storage and SageMaker for automated training and deployment.
- Enhanced **retrieval-augmented generation (RAG)** system by 25% accuracy and 30% efficiency through embedding optimization and FAISS tuning.
- Delivered technical demos and client-facing reports that influenced adoption of ML systems for enterprise analytics.

Larsen & Toubro | Python Developer Intern | Chennai, India | Apr 2023 – Jun 2023

- Developed a **voice search engine** integrated into the company's web platform, boosting user engagement by 25% and reducing query latency by 40%.
- Built APIs and optimized backend performance for production usage with thousands of daily queries.
- Delivered a Power BI dashboard surfacing product insights, directly guiding feature prioritization and increasing identified user pain points by 20%.

GOX.ai | Machine Learning Intern | Chennai, India | Nov 2021 – Feb 2022

- Developed a **computer vision model** to remove shadows from face portraits, improving preprocessing pipelines for downstream facial recognition tasks.
- Achieved 80% accuracy in distinguishing hair vs. shadows via an RNN classifier on 8k+ images, improving robustness of customer-facing applications.

Projects

AI Industry Analyst Agent | Python, LangGraph, FAISS, HuggingFace | Jul 25

- Built an **autonomous trend-tracking agent** that processes daily AI news at scale using RAG, Hugging Face zero-shot classifiers, and LangGraph workflows.
- Automated ingestion, vectorization, and summarization across **hundreds of documents/day**, reducing manual monitoring by 100%.
- Integrated a **Streamlit dashboard** for visualization and an X-posting module to share real-time insights externally.

Text to SQL AI Chatbot | Python | Apr 2024

- Engineered an **AI-driven SQL generator** that converted natural language into optimized queries across 40+ database tables.
- Implemented a RAG-based vector DB (10k+ embeddings) for contextual query precision and deployed on Red Hat OpenShift, supporting **50+ concurrent users in production**.

Technical Skills

- Programming:** Python (advanced), R, SQL, C++
- ML & AI:** Transformers, YOLO, CNNs, RNNs, RAG, Explainability (SHAP, LIME)
- Frameworks & Libraries:** TensorFlow, PyTorch, OpenCV, Hugging Face, LangChain, FAISS
- Cloud & Infra:** AWS (S3, SageMaker, Bedrock), Docker, Spark, Kafka, FastAPI, Flask, OpenShift
- Data & Visualization:** Power BI, Tableau, Streamlit, Pandas, NumPy