

# Samay Shetty

AI/ML Engineer | Software Developer

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## Summary:

AI/ML Engineer with hands-on experience in building scalable ML systems, applied NLP research, and entrepreneurial product development. Published in IEEE, ArXiv, IJCA etc with expertise in LLMs, RAG, neural networks, and data-driven optimization.

## Education:

**Master's in Computer Science** | Rochester Institute of Technology, NY (Aug 2024 – Present)

**Bachelor's in Electronics & Telecommunication** (Minor in Data Science) | University of Mumbai (2020 – 2024)

## Technical Skills:

Languages: Python, SQL, Java, C++, C | Frameworks: TensorFlow, PyTorch, Hugging Face, LangChain | Tools: NumPy, Pandas, OpenCV, MongoDB, Git/GitHub | Focus Areas: NLP, LLMs, RAG, Generative AI, Data Warehousing

## Experience:

### Founder | Savora AI (AI-powered restaurant operations platform, in development)

- Developing AI dashboard using neuro-symbolic AI and Graph RAG for financial reasoning and real-time decision support.
- Built pipelines and warehousing to integrate multi-source restaurant data (sales, inventory, scheduling).
- Conducted market validation with CEOs to refine product requirements.

### Software Developer (ML) | Lab of Population Intelligence, RIT (Summer 2025)

- Researched annotator disagreement in supervised learning and updated **DisCo (Distribution from Context)**, a neural model predicting full label distributions by modeling annotator-item pairs.
- Developed scalable ML pipelines for six benchmark NLP datasets, incorporating annotator metadata embeddings, ensemble evaluation, and GPU-accelerated training.
- Enhanced DisCo with refined loss functions and metadata integration, achieving **~39% performance improvement** and contributing to a **Top-9 global leaderboard ranking (LeWiDi 2025)** and a peer-reviewed publication.

### ML Developer (Research Assistant) | Vidyalankar Institute of Technology (Aug–Dec 2023)

- Developed diabetes prediction model with Random Forest, improving accuracy by 8%.
- Optimized preprocessing pipelines, reducing model training time by 40%.
- Co-authored peer-reviewed paper on ML in healthcare diagnostics published in TANZ.

## Projects:

### BizRizz — Agentic AI Platform for business consultancies. ([Live Demo](#) | Python, Flask, Gemini AI, HTML, CSS, JS)

- Built a production-ready AI agent to analyze competitor data and customer sentiment, offering strategic recommendations for businesses.
- Integrated Google Places, Gemini LLM, and Paychex APIs for real-time data ingestion and insight generation.
- Developed full-stack architecture and deployed scalable version on Render.

### MatSAR — ML-Driven PolSAR Data Classification Tool. ([Demo](#) | C++, MATLAB, App Designer)

- Led development of MatSAR, a custom ML tool outperforming PolSARPro in SAR image classification accuracy and UI accessibility.
- Trained and benchmarked different ML algorithms on decomposed PolSAR data; improved classification precision by 15%.
- Developed MATLAB-based GUI for interactive classification workflows; reduced inference time by 35% by applying GPU computing.

### Amazon Packaging Size Prediction (Python, Pandas, NLP)

- Developed an ML model predicting optimal packaging sizes by training over 200k data points using Random Forest.
- Utilized NLP techniques to extract and process product specifications, improving prediction accuracy significantly.

## Publications:

- IEEE IGARSS 2024: [Polsarhub: A Large-Scale Repository for Polsar Data](#)
- ArXiv 2025: [Improving Distributional Predictions via Metadata and Loss Reweighting with DisCo](#)
- IJCA 2025: [Matsar: A Comprehensive Machine Learning Approach for Polsar Data Processing](#)