Harshitha Rasamsetty

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EDUCATION

Duke University — **NC, USA**
Master of Engineering, Artificial Intelligence — *Aug 2024 - Dec 2025*

SRM Institute of Science and Technology — **India**
Bachelor of Technology, Software Engineering — *June 2017 - June 2021*

REWARDS

- Won 1st place in LIVE AI Ivy Plus 2025 (Harvard-Duke AI/ML Hackathon).
- Published research paper "CrowdMaps" in American Institute of Physics Conference Proceedings.

EXPERIENCE

AI Intern — May 2025 – Present
Meta (via HCL) — NC, USA

- Built Llama-powered application using Ent and Hack to auto-generate question-answer pairs from support tickets, serving 540 support groups and processing 18K tickets monthly with 61% support volume reduction.
- Improved AI content acceptance rates from 60% to 90% through systematic prompt engineering, A/B testing, and user feedback analysis, reducing manual review overhead and increasing user satisfaction.
- Integrated Metagen APIs using GraphQL mutations with standardized connection protocols, reducing integration time by 50% and enabling 99.9% uptime across distributed systems processing 18K tickets monthly.

Software Engineer (Graduate Project) — Jan 2025 - May 2025
Dentsply Sirona — NC, USA

- Developed an E2E predictive maintenance system using PySpark and MLflow, analyzing 100+ telemetry features from 5K+ devices across 200+ facilities.
- Achieved 96% accuracy in forecasting equipment failures 30 days ahead, reducing maintenance downtime by 40% and false positive alerts by 25% through optimized model tuning and threshold calibration.

Software Engineer — Aug 2021 – June 2024
Barclays — India

- Optimized credit approval data pipelines using Hive/SQL (partitioning, indexing, query rewriting), reducing retrieval latency by 30% from 45s to 31s to accelerate risk modeling for 2M+ monthly credit applications.
- Enhanced PySpark ETL on Delta Lake, cutting processing time by 40% through code optimization, enabling real-time feature engineering for ML models processing 5M+ daily transactions.
- Created 100+ decision logic modules in FICO Blaze using Python-based implementation, improving SLA compliance by 25% through dynamic rule versioning and cross-functional collaboration.

PROJECTS

CrowdMaps: Published research paper in American Institute of Physics

- Designed real-time crowd monitoring system using OpenCV and YOLOv3 for video analysis, building complete pipeline from video ingestion through object detection to heatmap generation via REST APIs.
- Achieved 82 FPS processing speed on NVIDIA Jetson with 89% detection accuracy, deployed to 3 pilot locations processing 100K+ frames daily.
- *Source: https://doi.org/10.1063/5.0109133*

NovaScore (Harvard-Duke AI/ML Hackathon)

- Built credit assessment platform with FastAPI backend, React frontend, and PostgreSQL database, engineering 20+ alternative data features from career history, social media activity, and subscription patterns.
- Trained Random Forest and XGBoost models achieved 96% accuracy in credit scoring, enabling 30% more underserved applicants to qualify for loans.
- *Source: https://tinyurl.com/novascore*

Financial Strategy Agent

- Designed multi-agent financial planning system using LangGraph and GPT-4, optimizing portfolios, tax strategies, and risk assessment, cutting plan generation time significantly.
- Developed comprehensive financial plans with automated rebalancing, analyzing 50+ market indicators and real-time Tavily API data for personalized strategies across diverse risk profiles.
- *Source: https://github.com/harshitha-ras/Financial-Strategy-Agent*

SKILLS

- Languages: Python, C/C++, Java, Hack (PHP dialect), Hive, SQL, JavaScript, GraphQL
- Frameworks: React, Flask, Pytorch, Tensorflow, Streamlit, Kafka, Flask, LlamaIndex
- Developer Tools: Git, Docker, VsCode, Jetbrains (Pycharm, IDEA etc), Azure, Dockerhub, Kubernetes, AWS
- Libraries: Pandas, Numpy, Matplotlib, Sklearn, Huggingface Transformers, Langchain, OpenAI APIs, Anthropic APIs, PIL, Chromadb, NLTK, Peft, OpenCV, Guice, Awaitility, Junit, Jest