

GYANASAI ADUSUMILLI

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SUMMARY

Data Science master's student at Stevens Institute of Technology (graduating December 2026) who builds end-to-end machine learning systems in computer vision, remote sensing and retrieval-augmented generation (RAG). Industry experience training learning-to-rank models and running A/B tests at OYO; hands-on with PyTorch, scikit-learn, OpenCV and LLM pipelines, from data collection to deployed web demos. Seeking Machine Learning Engineer, AI Engineer and Data Scientist roles.

EDUCATION

Stevens Institute of Technology, Hoboken, NJ Jan 2025 – Dec 2026 (expected)
Master of Science in Data Science | GPA: 3.66/4.0

SRM University AP, Amaravati, India Sep 2020 – Jun 2024
Bachelor of Technology in Computer Science and Engineering, Specialization in Artificial Intelligence

Relevant coursework: Machine Learning, Artificial Intelligence, Probability and Statistics, Linear Algebra, Data Structures, Database Management, Parallel Computing, Software Engineering

TECHNICAL SKILLS

Languages: Python, SQL, R, C++, Java, C

Machine Learning and AI: PyTorch, TensorFlow, Keras, scikit-learn, Deep Learning, Hugging Face, Sentence Transformers, FAISS, RAG, LLMs (Mistral-7B), NLP, Computer Vision, Learning to Rank, LightGBM, Feature Engineering, A/B Testing, OpenCV, CNNs (ResNet, U-Net), Transfer Learning

Data and Analytics: pandas, NumPy, Matplotlib, Spark, Tableau, Power BI, MySQL, MongoDB, Oracle

Cloud and Tools: Git, GitHub, Streamlit, Google Earth Engine, Google Colab, AWS, Azure, Linux

PROFESSIONAL EXPERIENCE

OYO | Technology Engineer Intern Jan 2024 – Jul 2024
Gurugram, India (Remote)

- Drove a **30% increase in user engagement** by launching a mobile-first application that gave users on-the-go access to critical system information.
- Trained **learning-to-rank (LTR) models** with the Ranking and Optimization team to boost high-performing hotels in search results, engineering features from bookings, clicks, ratings, prices, cancellations and location coordinates across **500+ hotels**.
- Evaluated ranking changes through **A/B tests** and analyzed the results with MySQL queries and dashboards, identifying the factors behind higher conversion rates and average booking values.

PROJECTS

Hotel Search Ranking with Learning to Rank | LightGBM, LambdaMART, pandas, A/B Testing Oct 2026

- Built a learning-to-rank system on 400,000 real Expedia hotel searches, engineering 44 features including within-search price and star ranks, visitor-history fit, competitor prices and out-of-fold hotel click and booking rates.
- Trained a LambdaMART model that ranked the booked hotel in the top 5 for **58.8% of searches versus 42.4%** for the best rule-based ranking (**+45% NDCG@5**) on 39,862 future searches.
- Validated with offline A/B tests (paired bootstrap): significant lift over a pointwise model, parity with Expedia's production ranker.

Water Body Detection from Satellite Imagery | PyTorch, U-Net, scikit-learn, Earth Engine 2023; rebuilt 2026

- Built a pipeline pulling cloud-masked Sentinel-2 and Landsat-8 imagery for 8 regions on 4 continents from Google Earth Engine.
- Trained a U-Net CNN that reached **0.984 water IoU and 99.0% pixel accuracy** on Sentinel-2, about two-thirds fewer errors than the NDWI index baseline.
- Benchmarked SVM, random forest, gradient boosting, KNN and logistic regression against the CNN on 500,000 test pixels, using a spatial block split to prevent data leakage.

Symptoma: AI Symptom and Diagnosis Companion | RAG, FAISS, LLMs, scikit-learn Jun 2025

- Co-built a four-stage pipeline combining ML classification, semantic search and LLM explanations to predict diseases.
- Achieved **98% accuracy, precision, recall and F1** with a random forest classifier on structured symptom-disease data.
- Encoded free-text symptoms with Sentence Transformers (all-mpnet-base-v2) and indexed **240,000+ cases** in FAISS; Mistral-7B generated explanations grounded in the retrieved cases.

ACTIVITIES

- Competed in 5+ hackathons and was part of 2 winning teams building AI-driven environmental solutions.
- Paired 15 upperclassman mentors with incoming students, helping every participant connect with campus resources.