

# Yojitha Uppala

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## SKILLS

**Natural Language Processing & LLMs:** Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Prompt Engineering, Text Embeddings, Semantic Search, Question Answering, Text Summarization, Sentiment Analysis, Named Entity Recognition (NER), Transformer & BERT-based models

**Machine Learning & Deep Learning:** PyTorch, TensorFlow/Keras, Scikit-learn, Neural Networks, Model Evaluation & Benchmarking, Hyperparameter Tuning, Error Analysis, Experimentation, Statistical Analysis

**Data & MLOps:** Python, SQL, Pandas, NumPy, PySpark, Airflow, ML Pipelines, FastAPI, CI/CD, Docker, Model Deployment, Inference Optimization

**Cloud & Big Data:** GCP (BigQuery, Vertex AI, Cloud Run, Cloud Storage), AWS (S3, Lambda, Glue, Redshift), Distributed Data Processing

## EXPERIENCE

### Graduate Teaching Assistant – Applied Natural Language Processing Aug 2025 – Dec 2025

*The University of Texas at Dallas*

*Dallas, TX*

- Collaborated with faculty and stakeholders to deliver applied NLP and LLM-based solutions using Transformer and BERT architectures, supporting real-world tasks such as text classification, representation learning, and sequence modeling.
- Designed and standardized model evaluation and error analysis workflows for NLP systems, improving model robustness and reducing experimentation and debugging time by 30%.

### Machine Learning Intern Jan 2025 – May 2025

*InnovatEV Global*

*Dallas, TX*

- Developed and deployed production-grade ML pipelines by translating business requirements into scalable AI solutions, improving inference throughput by 30% across computer vision workflows.
- Built performance evaluation, monitoring, and CI/CD pipelines for deployed models, reducing manual validation effort by 40% and enabling reliable integration into downstream business applications.

### Systems Engineer Jun 2023 – Jan 2024

*Tata Consultancy Services*

*Kolkata, India*

- ETL Performance: Optimized SSMS queries and MuleSoft API integrations across 5+ enterprise systems, reducing ETL data latency by 35%.
- Statistical Experimentation: Conducted A/B tests on data retrieval workflows, identifying optimizations that boosted mission-critical analytics performance by 40%.

## RESEARCH EXPERIENCE

### U-Net Deep Neural Network-Based Landslide Detection Jul 2023 – Oct 2023

*National Institute of Technology Agartala*

*India*

- Semantic Segmentation: Optimized U-Net architectures for satellite imagery, achieving 91.12% detection accuracy and a 5% increase in F1-score across diverse terrain types.
- Model Robustness: Authored a Springer research paper detailing domain shift investigations that improved model generalization across 6 distinct environmental conditions.

## PROJECTS

### LLM-Powered Financial Document Intelligence for Investment Insights Aug 2025 – Dec 2025

*LLM-based NLP system for extracting investment insights from large-scale financial documents.*

- Built an LLM-powered NLP system to analyze financial documents (10-K filings, earnings call transcripts), enabling semantic search, question answering, and content extraction, and reducing manual document review time by 60%.
- Implemented Retrieval-Augmented Generation (RAG) with embeddings and designed a model evaluation framework (retrieval relevance, answer faithfulness, hallucination checks), improving response accuracy and reliability by 25%.

## EDUCATION

### The University of Texas at Dallas Jan 2024 – Dec 2025

*Master of Science in Business Analytics & Artificial Intelligence*

### Indian Institute of Technology Madras Jan 2022 – May 2023

*Diploma in Programming & Data Science*

### National Institute of Technology Agartala Aug 2019 – May 2023

*Bachelor of Engineering in Electronics and Instrumentation*

*GPA: 3.77/4.00*

*GPA: 6.24/10.00*

*GPA: 8.44/10.00*

## CERTIFICATIONS

Google Cloud Professional Data Engineer

Salesforce Certified Associate