

# Poojitha Penta

413-450-2002 | [ppenta@umass.edu](mailto:ppenta@umass.edu) | [linkedin.com/in/poojithapenta](https://linkedin.com/in/poojithapenta) | [github.com/Poojitha1509](https://github.com/Poojitha1509) | [portfolio](#)

## EDUCATION

### University of Massachusetts Amherst

Sep 2023 – May 2025

*Master of Science in Computer Science*

*GPA: 3.7/4*

- Coursework: ML, Advanced NLP, Information Retrieval, Security & Privacy in GenAI, Applied Statistics

### Sreenidhi Institute of Science and Technology

Jun 2018 – Jun 2022

*Bachelor of Technology in Computer Science & Engineering*

*GPA: 8.65/10*

- Coursework: Data Structures, Design & Analysis of Algorithms, Operating Systems, Introduction to Data Science

## TECHNICAL SKILLS

**Languages/Technologies** : Python, R, SQL, HTML/CSS, JavaScript, Microsoft Azure, AWS, Kafka, Django

**AI/ML**: PyTorch, TensorFlow, NLTK, spaCy, scikit-learn, NumPy, pandas, Hugging Face

**Certifications**: Coursera : Python for Everybody, IBM Badges : Deep Learning using TensorFlow, Deep Learning Essentials and Accelerated Deep learning with GPU.

## EXPERIENCE

### UMass BioNLP Lab

Feb 2024 - May 2024

*Graduate Student Researcher*

*Amherst, MA*

- Worked on developing a robust system using Large Language Models (LLM) to efficiently process and comprehend extensive biomedical texts.
- Performed instruction tuning on the curated BioLongInstruct dataset comprising **27,096** records and leveraged **LongLoRA** to enhance the adaptation of **LLaMA 2-7B** to the data.

### QwikSkills

Feb 2023 - Jul 2023

*Cloud Engineer Intern*

*Remote*

- Collaborated in building hands-on Azure labs using Machine Learning, Cognitive Services, Azure Databricks , Virtual Machines ,Web App services, PostgreSQL.
- Established infrastructure security with custom roles and policies, saving costs by approximately **\$ 1 million** through optimized Stock Keeping Unit (SKU) configurations.

### AT&T

Mar 2022 - Sep 2022

*Technical Intern*

*Hyderabad, India*

- Built an automated system leveraging Azure Monitor to effectively track and ensure the availability of applications
- Handled delivery of JSON traces to Application Insights using **Telemetry Client SDK**, scheduled customized alert emails, and analyzed recorded insights through workbooks and charts.
- Developed a **REST API** interface for telephone ownership lookup with HMAC-SHA256 for authorization and base64 for encoding.

## PROJECTS

### LectureMate

Sep 2024 - Nov 2024

- Devised a 24/7 academic companion offering instant answers based on course lectures, reading materials, logistics.
- Fine-tuned **LLaMA 3.2-3B** using LoRA to optimize the model for precise, context-aware academic Q&A.

### Lower Sampling with Recurring Elimination Improves Self-Consistency

Feb 2024 - May 2024

- Implemented a recurring elimination strategy for Chain-of-Thought reasoning tasks with **GPT-2 Large**, **Gemma-2B**, and **Gemma-7B**, reducing computational overhead by minimizing redundant sampling.
- Demonstrated consistent accuracy improvements across models, up to 22% increase per 5 additional sampled paths

### NewsNugget

Feb 2024 – May 2024

- Integrated a real-time news aggregator (**Apache Kafka + PySpark**) and summarizer (**T5-base**) that categorizes, processes latest news articles and sends notifications based on user preferences.
- Optimized pipeline to process 100+ articles daily, delivering summaries to 1,000+ users with 30% faster processing

### Modeling the BERT–FLAN-T5 Synergy for Personalized News Classification

Sep 2023 - Dec 2023

- Proposed a **RAG** framework that integrates BERT for retrieval and a FLAN-T5 base for categorizing news articles
- Achieved 4 point absolute F1 score increase with BERT personalized encodings when compared to baseline BM25.