# **Shriya Atmakuri**

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## **Work Experience**

### J.P. Morgan Chase & Co. | Machine Learning Center of Excellence

Jan 2023 – Present New York, NY

AI & ML Associate Sr

- > Led end-to-end development of **News Reputation Risk Detection Model**; elicited requirements from **multiple stakeholders**, created data sampling heuristics, trained smaller **transformer models** on multiple GPUs and benchmarked against **LLMs**. Achieved 75% precision and 98%+ recall in production.
- > Implemented components of a robust **LLM Text to SQL chatbot** for quantitative research team; used sparse and dense **RAG** pipeline with **chain-of-thought prompting** to achieve >95% accuracy.
- > Owned research and experimentation for single-document **news summarization**; fine-tuned and evaluated **BART & PEGASUS** models on large dataset and compared to prompted **LLMs**; designed human **evaluation protocols** and experimented with reference-based and reference-free automatic evaluation methods.
- > Improved adoption of news platform by **explaining** product behaviour to **non-technical teams** and **training** annotators to become power users for enhanced news curation.

### Microsoft | Azure Backup Team

Jun 2018 – Apr 2020 Hyderabad, India

Software Engineer

- > Owned and maintained **scheduling** components on client-side Windows agent and **prototyped** a platform-agnostic implementation for scheduling.
- > Designed and implemented a new **API** and flow in a **microservice** to manage client-side agent configuration through services which reduced resolution time of customer support cases.

#### Education

## **University of Massachusetts Amherst**

Jan 2021 - Dec 2022

MS Computer Science / GPA: 3.88

Amherst, MA

**Coursework** Advanced NLP, Conversational AI, Machine Learning, Neural Networks, Reinforcement Learning, Computational Psycholinguistics

### **Research & Projects**

**Word2Box** Conducted research on region-based **word embeddings** and aided development of the Word2Box model.

> Dasgupta, Shib, et al. "Word2Box: Capturing Set-Theoretic Semantics of Words using Box Embeddings." Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics. Vol. 1. 2022.

**Robustness of Explanation** Tested robustness of **explanation methods** commonly applied to NLP models through extensive experimentation with mentorship from **IBM Research** 

> Atmakuri, Shriya, et al. "Robustness of Explanation Methods for NLP Models." Workshop on Trustworthy Artificial Intelligence as a part of the ECML/PKDD 22 program. 2022.

**Question Generation for Conversational Question Answering** Implemented a **BERT-based** Conversational Question Answering system and a **GPT-2** based Question Generation model. Experimented with **retraining** the QA system using generated questions.

**Fact-Checked Claim Retrieval** Tackled the task of fact-checking input claims given a set of previously fact-checked claims. Used **siamese-style** BERT dual-encoder architecture for **clustering**.

#### Skills

**Languages & Libraries** Python, SQL, PyTorch, HuggingFace Transformers, LangChain, spacy, scikit-learn, nltk, gensim, seaborn, pandas, pytorch-lightning

Areas Natural Language Processing, Deep Learning, Data Science, Large Language Models, Generative AI