AKSHAT GUPTA

CS PhD, UC Berkeley

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SUMMARY

I'm a second year PhD Student at UC Berkeley affiliated with BAIR. I'm currently working on knowledge editing and memorization in LLMs.

SKILLS

Languages: Python, Go, MATLAB, C++, Javascript, C
Tools: Pytorch, Huggingface, NLTK, Spacy
Technologies: AWS, GCP, Azure, Dialogflow, Docker

EDUCATION

8/2023 - Present **PhD, Computer Science** — University of California, Berkeley
Advisor : Gopala Anumanchipalli

1/2020 - 5/2021 **MS, Electrical and Computer Engineering** — Carnegie Mellon University
Advisor : Alan W Black

10/20217 - 3/2020 **MS, Applied and Engineering Physics** — Technical University of Munich, Germany
Thesis Advisor : Gregory Eyink (Johns Hopkins University)

8/2013 - 6/2017 **B.Tech, Electrical Engineering** — Indian Institute of Technology Mandi
Thesis Advisor : Renu Rameshan

EXPERIENCE

6/2021 – 8/2023 **Senior Associate, AI Research** — JPMorgan Chase
- Developed relation extraction models for financial knowledge graphs, resulting in a SIGIR 2023 paper and securing a patent.
- Led the design and deployment of production-grade solutions for public information discovery, enabling insights into companies and financial institutions, resulting in a patent.
- Supervised a summer intern and mentored student teams from Columbia University and Carnegie Mellon University on sponsored capstone projects, fostering collaborative research and development.

8/2020 – 5/2021 **Teaching Assistant, Deep Learning (11785)** — Carnegie Mellon University
- Taught lectures on Transformers and GANs (Youtube links : Transformers, GANs-1, GANs-2)
- Spearheaded testing and deployment of homework on building E2E speech to text systems

PUBLICATIONS

1. **Resolving Model Collapse during Sequential Model Editing**
Akshat Gupta, Sidharth Baskaran, Gopala Anumanchipalli
EMNLP 2024

2. **A Unified Framework for Model Editing**
Akshat Gupta, Dev Sajnani, Gopala Anumanchipalli
EMNLP 2024 Findings

3. **Self-Assessment Tests are Unreliable Measures of LLM Personality**
Akshat Gupta, Xiaoyang Song, Gopala Anumanchipalli
BlackboxNLP 2024, co-located with EMNLP 2024

4. **Model Editing at Scale leads to Gradual and Catastrophic Forgetting**
Akshat Gupta, Anurag Rao, Gopala Anumanchipalli
ACL 2024 Findings

5. **REFinD: Relation Extraction Financial Dataset**
Simerjeet Kaur, Charese Smiley, **Akshat Gupta**, Joy Sain, Dongsheng Wang, Toyin Aguda, Sameena Shah
SIGIR 2023

6. **Probing Quantifier Comprehension in Large Language Models: Another Example of Inverse Scaling**
Akshat Gupta
BlackboxNLP 2023, co-located with EMNLP 2023

7. **Intent classification using pre-trained language agnostic embeddings for low resource languages**
Hemant Yadav, **Akshat Gupta**, Sai Krishna Rallabandi, Alan W Black, Rajiv Ratn Shah
Interspeech 2022

8. **Acoustics Based Intent Recognition Using Discovered Phonetic Units for Low Resource Languages**
Akshat Gupta, Sai Krishna Rallabandi, Alan W Black
ICASSP 2021

PATENTS

1. **Method and system for automated public information discovery**
   Akshat Gupta, Simerjot Kaur, Xiaomo Liu, Armineh Nourbakhsh, Andrea Stefanucci, Alex Woodgate, Sameena Shah
   US Patent 12,001,491

2. **Method and system for detection of anomalous rejections of foreign exchange requests**
   Nacho Navarro, Xiaomo Liu, Simran Lamba, **Akshat Gupta**, Sameena Shah
   US Patent App. 18/085,104

3. **Method and system for domain adaptation of social media text using lexical data transformations**
   Akshat Gupta, Xiaomo Liu, Sameena Shah
   US Patent App. 18/103,858

4. **Method and system for understanding financial documents**
   Simerjot Kaur, Charese Smiley, Joy Sain, Suchetha Siddagangappa, **Akshat Gupta**, Sameena Shah
   US Patent App. 17/647,356

ACADEMIC SERVICE

Reviewing
- ICLR 2024
- ACL Rolling Review - June 2024, August 2024
- ACL 2023
- EMNLP 2022

Workshop Organization
- 4th Workshop on Knowledge Discovery from Unstructured Data in Financial Services, SIGIR 2023

ADVISING

Atahan Ozdemir, Undergraduate UC Berkeley	2024 - Present
Maochuan Lu, Undergraduate UC Berkeley	2024 - Present
Dev Sajnani, Undergraduate UC Berkeley, Published [2]	2024
Anurag Rao, Undergraduate UC Berkeley (–> MS, University of Oxford), Published [4]	2023 - 2024
Xiaoyang Song, MS Columbia University (–> PhD, University of Michigan), Published [3]	2023
Anant Singh, MS NYU (–> Machine Learning Engineer, Apple)	2022 - 2023