AKSHAT GUPTA

CS PhD, UC Berkeley

Personal Website | akshat.gupta@berkeley.edu
412 892 0560 | Linkedin
Berkeley, California | Google Scholar

SUMMARY

I'm a third-year PhD Student at UC Berkeley affiliated with BAIR. I'm currently working on continual learning, latent information processing and interpretability.

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

10/2017 - 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

5/2025 – 8/2025 **Research Scientist Intern** — **IBM**
- Topic - Latent Reasoning in LLMs
- Working Team - Payel Das (Manager), Subhajit Chaudhury, Matt Riemer, Irene Ko, Sarath Swaminathan

6/2021 – 8/2023 **Senior Associate, AI Research** — **JPMorgan Chase**
- Topics - Relation extraction, Knowledge graphs and Large scale public information discovery
- Publication - [11], Patents - [1], [2], [3],

9/2018 – 6/2019 **Visiting Research Scholar** — **Johns Hopkins University**
- Topic - Vorticity dynamics in turbulent channel flows operating under Lagrangian Dynmaics
- Publications - [15, 16]

PUBLICATIONS

1. **Lifelong Knowledge Editing requires Better Regularization**
Akshat Gupta, Phudish Prateepamornkul, Maochuan Lu, Ahmed Alaa, Thomas Hartvigsen, Gopala Anumanchipalli
EMNLP 2025 Findings

2. **Efficient Knowledge Editing via Minimal Precomputation**
Akshat Gupta, Maochuan Lu, Thomas Hartvigsen, Gopala Anumanchipalli
ACL 2025 Main Conference

3. **How Linearly Associative are Memories in Large Language Models?**
Akshat Gupta, Nehal Sindhu, Gopala Anumanchipalli
Oral Presentation, ICLR 2025 Workshop, New Frontiers in Associative Memories

4. **Norm Growth and Stability Challenges in Localized Sequential Knowledge Editing**
Akshat Gupta, Christine Fang, Atahan Ozdemir, Maochuan Lu, Ahmed Alaa, Thomas Hartvigsen, Gopala Anumanchipalli
KnowFM @ AAAI 2025 (Outstanding Paper Award)

5. **Sylber: Syllabic Embedding Representation of Speech from Raw Audio**
Cheol Jun Cho, Nicholas Lee, **Akshat Gupta**, Dhruv Agarwal, Ethan Chen, Alan Black, Gopala Anumanchipalli
ICLR 2025

6. **PokerBench : Training Large Language Models to become Professional Poker Players**
Richard Zhuang, **Akshat Gupta**, Richard Yang, Aniket Rahane, Zhengyu Li, Gopala Anumanchipalli
AAAI 2025

7. **Rebuilding ROME : Resolving Model Collapse during Sequential Model Editing**
Akshat Gupta, Sidharth Baskaran, Gopala Anumanchipalli
EMNLP 2024 Main Conference

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

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

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

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

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

13. **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

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

15. **Stochastic Lagrangian dynamics of vorticity. Part 1. General theory for viscous, incompressible fluids**
Gregory Eyink, **Akshat Gupta**, Tamer Zaki
Journal of Fluid Mechanics, 2020 (Volume 901, Page A2)

16. **Stochastic Lagrangian dynamics of vorticity. Part 2. Application to near-wall channel-flow turbulence**
Gregory Eyink, **Akshat Gupta**, Tamer Zaki
Journal of Fluid Mechanics, 2020 (Volume 901, Page A3)

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

AWARDS

- Outstanding Paper Award, KnowFM Workshop @ AAAI 2025 [4]
- NVIDIA Compute Grant of 16,000 GPU hours for A100 GPUs (80GB) on the topic - "Enhancing Post-training Editability via Knowledge Modularization"
- Student Travel Grant, BlackboxNLP 2024, co-located with EMNLP 2024
- UC Berkeley EECS Fellowship, 2023
- Best Undergraduate Thesis, IIT Mandi 2017 [Topic - Blind Image Deconvolution]

INVITED TALKS

- UC Berkeley, 5/2025 - *"AI Interpretability"* (Guest Lecture for CS 188 - Introduction to Artificial Intelligence)
- A5 Labs, 4/2025 - *"LLMs and Poker"*
- UPitt NLP Seminar, 3/2025 - *"The Past, Present and Future of Knowledge Editing"*
- CMU, 11/2021 - *"Transformers and GNNs"* (Guest Lecture for 11785 - Introduction to Deep Learning) [Link]

ACADEMIC SERVICE

Reviewing

- ICLR 2025, ICML 2025, COLM 2025
- ACL Rolling Review : June 2024, August 2024, October 2024, December 2024, May 2025
- ACL 2023
- EMNLP 2022

Workshop Organization

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

ADVISING

- Maochuan Lu, Undergrad UC Berkeley (–> *MS, CMU*), Published [2, 4] 2024 - 2025
- Richard Zhuang, Undergrad UC Berkeley (–> *MS, Stanford University*), Published [6] 2024 - 2025
- Nehal Sindhu, Undergrad UC Berkeley (–> *SWE, Amazon*), Published [3] 2024 - 2025
- Atahan Ozdemir, Undergrad UC Berkeley (–> *SWE, Google*), Published [4] 2024
- Dev Sajnani, Undergrad UC Berkeley, Published [8] 2024
- Anurag Rao, Undergrad UC Berkeley (–> *MS, University of Oxford*), Published [9] 2023 - 2024
- Xiaoyang Song, MS Columbia University (–> *PhD, University of Michigan*), Published [10] 2023
- Anant Singh, MS NYU (–> *MLE, Apple*) 2022 - 2023