Abhinav Chinta

abhinav.chinta18@gmail.com ❖ (217) 778-8625 ❖ linkedin.com/in/abhinavchinta/

EDUCATION

University of Illinois Urbana-Champaign **Aug 2021 – May 2025**
BS, Computer Science, Minor in Statistics *Champaign, IL*
Cumulative GPA: 3.85/4.0
James Scholar, Innovation LLC Scholar, Dean's List – Spring 2022, Fall 2022
Relevant Coursework: *CS 233 (Computer Architecture), CS 361 (Probability and Statistics), CS 374 (Algorithms), CS 440 (Artificial Intelligence), CS 446 (Machine Learning), CS 499 (Senior Thesis), CS 598 (Conversational AI), CS 598 (LLMs for software testing)*

WORK EXPERIENCE

Sandia National Laboratories **May 2024 – Present**
Research Intern *Albuquerque, NM*
- Conducting research on Automated Attribution to Identified Sources using RAG and large corpora agreement scores

Prof. Dilek Hakkani Tur Research Group (ConvAI Lab) **Aug 2023 – Present**
Undergraduate Researcher *Champaign, IL*
- Authored a paper on Human Preference learning using fine-tuned preference learning agents for CS 598
- Currently working on improving the performance of small models using reasoning distillation from larger models

Prof. Heng Ji Research Lab (BLENDER Lab) **Jun 2023 – Present**
Undergraduate Researcher *Champaign, IL*
- Authored an EMNLP submission investigating the efficacy of domain-agnostic self-refinement on Open-Source LLMs
- Developed a novel PeRFICS metric to help rank Open-Source LLMs based on use case and performance constraints

Prof. Kevin Chang Research Group **Aug 2023 – Dec 2023**
Undergraduate Researcher *Champaign, IL*
- Conducted research on token efficient conversational memory using Directed Acyclic Graphs (DAGs)
- Engage in weekly peer-reviews with fellow members and enrolled in CS-598 for graduate advanced research credits

Nference, Inc. **May 2023 – Aug 2023**
Software Development Intern *Cambridge, MA*
- Trained a YOLO model to detect Mitotic figures in histological tumor images to achieve a 92% True Positive Rate
- Utilized ChatGPT API to automate Metabase queries for slide scanning analytics for Mayo Clinic and Duke Health

Jane Street **May 2023**
SEE Quant Trading Program Fellow *New York, NY*
- One among 30 students selected for the Quantitative Trading Program.
- Participated in multiple mock trading sessions with Quants at the firm and other competitions like Estimathon and Figgie

PUBLICATIONS

ACL ARR – Under Submission **October 2024**

Unsupervised Human Preference Learning **EMNLP 2024**
- Introduced a novel framework using small "preference agent" models to personalize large language model outputs
- Achieved 80% performance gains over baselines across multiple domains through novel preference distillation technique

Democratizing LLMs: An Exploration of Cost-Performance Trade-offs in Open-Source Models **EMNLP 2023**
- Co-authored a research paper investigating the efficacy of domain agnostic self-refinement on Open-Source LLMs
- Achieved over 100% of ChatGPT's performance using smaller 13B and 30B parameter models on the Vicuna benchmark