

Nishant Balepur

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RESEARCH INTERESTS

I am a Ph.D. student in computer science at the University of Maryland, College Park, working with Professors Jordan Boyd-Graber and Rachel Rudinger. I conduct research at the intersection of natural language processing, information retrieval, and AI safety, where I design methods to help language models reliably and safely convey knowledge to users. I am extremely grateful to be funded by the NSF Graduate Research Fellowship Program.

EDUCATION

- **University of Maryland, College Park (UMD)** College Park, MD
Ph.D. Computer Science Aug 2023 - Present
Advisors: Professors Jordan Boyd-Graber, Rachel Rudinger
- **University of Illinois at Urbana-Champaign (UIUC)** Urbana, IL
B.S. Computer Science; B.S. Statistics (Dual Degree); GPA: 4.00/4.00 Aug 2019 - May 2023
Collaborators: Professors Kevin Chen-Chuan Chang, Jiawei Han, Hari Sundaram, Diyi Yang
Relevant Courses: Data Structures, Algorithms, Natural Language Processing, Data Mining, Social and Information Networks, Formal Models of Computation, Applied Machine Learning, Unsupervised Learning
Skills: Python, R, SQL, Java, C/C++, PHP, HTML/CSS/JS, OCaml, NLP, ML, IR, Data Science, Web Dev

PUBLICATIONS AND WRITTEN WORK

- Expository Text Generation: Imitate, Retrieve, Paraphrase
The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)
Nishant Balepur, Jie Huang, Kevin Chen-Chuan Chang
- Text Fact Transfer
The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)
Nishant Balepur, Jie Huang, Kevin Chen-Chuan Chang
- DynaMiTE: Discovering Explosive Topic Evolutions with User Guidance
Findings of the Association for Computational Linguistics (ACL 2023)
Nishant Balepur*, Shivam Agarwal*, Karthik Ramanan, Susik Yoon, Diyi Yang, Jiawei Han
- Mastering the ABCDs of Complex Questions: Answer-Based Claim Decomposition for Self-Evaluating LLMs
arXiv:2305.14750
Nishant Balepur, Jie Huang, Samraj Moorjani, Kevin Chen-Chuan Chang, Hari Sundaram
- Aligning Language Models with Factuality and Truthfulness
Undergraduate Senior Thesis
Nishant Balepur, Kevin Chen-Chuan Chang

RESEARCH EXPERIENCE

- **Feet Thinking Lab** UMD
Professor Jordan Boyd-Graber Aug 2023 - Present
 - Developing personalized language models to accurately predict what information students know
 - Aligning LLMs to generate mnemonic devices through a student-centered RLHF objective
- **RLab** UMD
Professor Rachel Rudinger Aug 2023 - Present
 - Studying the capability of LLMs to perform process-of-elimination style reasoning
 - Investigating methods to uncover which strategies LLMs use when answering multiple choice questions
- **Forward Data Lab** UIUC
Professor Kevin Chen-Chuan Chang Aug 2021 - June 2023
 - Designing tasks and techniques to improve the factuality, truthfulness, and reliability of LLMs
 - Resulted in two EMNLP 2023 main conference papers
- **Data Mining Group** UIUC
Professor Jiawei Han Aug 2022 - Dec 2022
 - Developing models for discovering temporal patterns in large, unlabeled document collections
 - Resulted in Findings of ACL 2023 conference paper

WORK EXPERIENCE

- **Meta** Menlo Park, CA
Software Engineering Intern May 2022 - Aug 2022
 - Collaborated with machine learning engineers and research scientists on the Facebook Creators Well-being team
 - Fronted a 15% drop in negative interactions across the one billion users on the Facebook platform
- **HiMarley** Remote
Data Science Intern May 2021 - Aug 2021
- **State Farm** Champaign, IL
Actuarial and Modeling Intern Aug 2020 - Dec 2020
- **John Deere** Remote
Software Engineering Intern Jun 2020 - Aug 2020

HONORS AND AWARDS

- **NSF Graduate Research Fellowship Program (GRFP)** April 2023 - April 2028
Provided 3 Years of Support over a 5 Year Period
- **Dean's Fellowship** April 2023 - April 2025
Awarded the Dean's Fellowship from UMD for outstanding academic achievement
- **UIUC Computer Science Graduation with Highest Honors** May 2023
Recommended by the UIUC computer science department to graduate with highest honors
- **C.W. Gear Outstanding Undergraduate Student** May 2022
Awarded to two seniors that have demonstrated excellence in research and service
- **James N. Snyder Memorial Award** May 2021
Awarded to three juniors based on academic merit