

## RESEARCH SUMMARY

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I am a Ph.D. student in computer science at the University of Maryland, College Park, advised by Professors Jordan Boyd-Graber and Rachel Rudinger. I conduct research with the goal of better aligning and evaluating LLMs, with a focus on generating **factual** knowledge, aligning models with **true user needs**, and understanding the **weaknesses** of models and benchmarks. I am extremely grateful to be funded by the NSF GRFP and a Cohere for AI Research Grant.

## EDUCATION

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- **University of Maryland, College Park (UMD)** College Park, MD  
Ph.D. Computer Science; GPA: 4.00/4.00 Aug 2023 - May 2027 (Expected)  
**Advisors:** Jordan Boyd-Graber, Rachel Rudinger  
**Committee:** Jordan Boyd-Graber, Rachel Rudinger, Shi Feng, Fumeng Yang
- **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:** Kevin Chen-Chuan Chang, Jiawei Han, Hari Sundaram, Diyi Yang

## SELECTED WORKS

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- A Smart Mnemonic Sounds like Glue Tonic: Mixing LLMs with Student Feedback to Make Mnemonic Learning Stick  
EMNLP 2024  
**Nishant Balepur**, Matthew Shu, Alexander Hoyle, ..., Shi Feng, Seraphina Goldfarb-Tarrant, Jordan Boyd-Graber  
**TL;DR:** We use LLM fine-tuning and DPO to generate mnemonics aligned with what users prefer and aid learning
- Artifacts or Abduction: How Do LLMs Answer Multiple-Choice Questions Without the Question?  
ACL 2024, **Best Paper Award at MASC-SLL 2024**  
**Nishant Balepur**, Abhilasha Ravichander, Rachel Rudinger  
**TL;DR:** We discover that LLMs can obtain high accuracy without the question in MCQA, and analyze how
- Expository Text Generation: Imitate, Retrieve, Paraphrase  
EMNLP 2023  
**Nishant Balepur**, Jie Huang, Kevin Chen-Chuan Chang  
**TL;DR:** We design a text generation model using iterative query planning and retrieval to generate expository texts

## PUBLICATIONS

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\* denotes equal contribution, † denotes mentored student

- Which of These Best Describes Multiple Choice Evaluation? A) Forced B) Flawed C) Fixable D) All of the Above  
Under Review (ACL)  
**Nishant Balepur**, Rachel Rudinger, Jordan Boyd-Graber
- Whose Boat Does it Float? Improving Personalization in Preference Tuning via Inferred User Personas  
Under Review (ACL)  
**Nishant Balepur**, Vishakh Padmakumar, Fumeng Yang, Shi Feng, Rachel Rudinger, Jordan Boyd-Graber
- Reverse Question Answering: Can an LLM Write a Question so Hard (or Bad) that it Can't Answer?  
NAACL 2025  
**Nishant Balepur**, Feng Gu, Shi Feng, Abhilasha Ravichander, Jordan Boyd-Graber, Rachel Rudinger
- MoDS: Moderating a Mixture of Document Speakers to Summarize Debatable Queries in Document Collections  
NAACL 2025  
**Nishant Balepur**, Alexa Siu, Nedim Lipka, Franck Dernoncourt, Tong Sun, Jordan Boyd-Graber, Puneet Mathur
- A Smart Mnemonic Sounds like Glue Tonic: Mixing LLMs with Student Feedback to Make Mnemonic Learning Stick  
EMNLP 2024  
**Nishant Balepur**, Matthew Shu†, Alexander Hoyle, ..., Shi Feng, Seraphina Goldfarb-Tarrant, Jordan Boyd-Graber
- KARL: Knowledge-Aware Retrieval and Representations aid Retention and Learning in Students  
EMNLP 2024  
Matthew Shu\*†, **Nishant Balepur\***, Shi Feng\*, Jordan Boyd-Graber
- Plausibly Problematic Questions in Multiple-Choice Benchmarks for Commonsense Reasoning  
EMNLP 2024 (Findings)  
Shramay Palta, **Nishant Balepur**, Peter Rankel, Sarah Wiegrefe, Marine Carpuat, Rachel Rudinger
- The Prompt Report: A Systematic Survey of Prompting Techniques  
Under Review (Nature)  
Sander Schulhoff\*, Michael Ilie\*, **Nishant Balepur**, ..., Shyamal Anadkat, Alexander Hoyle, Phillip Resnik

- **Artifacts or Abduction: How Do LLMs Answer Multiple-Choice Questions Without the Question?**  
ACL 2024, **Best Paper Award at MASC-SLL 2024**  
**Nishant Balepur**, Abhilasha Ravichander, Rachel Rudinger
- **It's Not Easy Being Wrong: Large Language Models Struggle with Process of Elimination Reasoning**  
ACL 2024 (Findings)  
**Nishant Balepur**, Shramay Palta, Rachel Rudinger
- **Is Your Large Language Model Knowledgeable or a Choices-Only Cheater?**  
ACL 2024 (KnowLLM Workshop)  
**Nishant Balepur**, Rachel Rudinger
- **Expository Text Generation: Imitate, Retrieve, Paraphrase**  
EMNLP 2023  
**Nishant Balepur**, Jie Huang, Kevin Chen-Chuan Chang
- **Text Fact Transfer**  
EMNLP 2023  
**Nishant Balepur**, Jie Huang, Kevin Chen-Chuan Chang
- **DynaMiTE: Discovering Explosive Topic Evolutions with User Guidance**  
ACL 2023 (Findings)  
**Nishant Balepur\***, Shivam Agarwal\*, Karthik Ramanan, Susik Yoon, Diyi Yang, Jiawei Han

## INDUSTRY RESEARCH EXPERIENCE

- **Adobe** San Jose, CA  
Research Scientist Intern: Multi-LLM Summarization  
Outcome: Patent Submission, Paper Committed to NAACL  
May 2024 - Aug 2024
- **Meta** Menlo Park, CA  
Software Engineering Intern: Harmful Comment Detection  
Outcome: 15% drop in negative interactions among Facebook's 1 billion users  
May 2022 - Aug 2022

## FELLOWSHIPS AND GRANTS

- **NSF Graduate Research Fellowship Program (GRFP)** April 2023 - April 2028  
Wrote proposal on NLP for information accessibility—\$159,000 over 3 Years of Ph.D.
- **Cohere for AI Research Grant Program** April 2024  
Wrote proposal on LLMs for AI Safety + Education—full access to Cohere models
- **Dean's Fellowship** April 2023 - April 2025  
Awarded the Dean's Fellowship from UMD for outstanding academic achievement

## AWARDS

- **MASC-SLL 2024 Best Paper Award** April 2024  
Selected for one of three best paper awards for "Artifacts or Abduction" by JHU
- **UIUC Computer Science Graduation with Highest Honors** May 2023  
Recommended by the UIUC computer science department to graduate with highest honors

## STUDENT MENTEES

- **Matthew Shu** (B.S. Yale → M.S. Yale), 2023-Present, LLMs for Education  
Two papers at EMNLP 2024 (long, main)
- **Atrey Desai** (B.S. UMD), 2024-Present, Dataset Artifacts
- **Jerry He** (HS Student → B.S. GTech), 2024-Present, Crossword Generation with LLMs

## PROFESSIONAL SERVICE

- **Conference Reviewer** UMD  
Reviewer for: \*ACL/ARR 2023-Present, COLING 2024, IEEE TASLP 2024  
Program Committee: TrustNLP 2024  
Great Reviewer Nomination: April, June, August 2024 ARR  
Outstanding Reviewer: EMNLP 2024  
2022-2024
- **Winter Storm LLM Workshop** UMD  
Led a 5-day workshop on LLMs for non-CS graduate students  
Jan 2023
- **SIGNLL** UIUC  
President of Special Interest Group for Natural Language Learning  
Aug 2020 - May 2021

## PROGRAMMING SKILLS

- **Languages:** Python, JavaScript/HTML/CSS R, C++, Java, OCaml
- **Libraries:** Huggingface, Datasets, TRL, Pytorch, nltk, Spacy, BeautifulSoup