

RESEARCH INTERESTS

I am a first-year 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 aligning, guiding, and interpreting LLMs, with a focus on **factuality** in text generation, **human-guided** frameworks, and **interpreting** the **safety** and **reliability** of LLMs. I am extremely grateful to be funded by the NSF GRFP and a Cohere for AI Research Grant.

EDUCATION

- **University of Maryland, College Park (UMD)** College Park, MD
Ph.D. Computer Science; GPA: 4.00/4.00 Aug 2023 - Present
Advisors: 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: Kevin Chen-Chuan Chang, Jiawei Han, Hari Sundaram, Diyi Yang

SELECTED WORKS

- A Smart Mnemonic Sounds like Glue Tonic: Mixing LLMs with Student Feedback to Make Mnemonic Learning Stick
Preprint
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
Nishant Balepur, Abhilasha Ravichander, Rachel Rudinger
Best Paper Award (4%) and Oral Presentation (7%) at MASC-SSL 2024
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 task and model with iterative planning and retrieval to generate factual texts

ALL PUBLICATIONS AND WRITTEN WORK

- A Smart Mnemonic Sounds like Glue Tonic: Mixing LLMs with Student Feedback to Make Mnemonic Learning Stick
Preprint
Nishant Balepur, Matthew Shu, Alexander Hoyle, ..., Shi Feng, Seraphina Goldfarb-Tarrant, Jordan Boyd-Graber
- Is Your Large Language Model Knowledgeable or a Choices-Only Cheater?
Under Review
Nishant Balepur, Rachel Rudinger
- Plausibly Problematic Questions in Multiple-Choice Benchmarks for Commonsense Reasoning
Under Review
Shramay Palta, **Nishant Balepur**, Peter Rankel, Sarah Wiegrefe, Marine Carpuat, Rachel Rudinger
- The Prompt Report: A Systematic Survey of Prompting Techniques
Preprint
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
Nishant Balepur, Abhilasha Ravichander, Rachel Rudinger
Best Paper Award (4%) and Oral Presentation (7%) at MASC-SSL 2024
- KARL: Knowledge-Aware Retrieval and Representations aid Retention and Learning in Students
Preprint
Matthew Shu*, **Nishant Balepur***, Shi Feng*, Jordan Boyd-Graber
- It's Not Easy Being Wrong: Large Language Models Struggle with Process of Elimination Reasoning
ACL 2024 (Findings)
Nishant Balepur, Shramay Palta, 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
- Mastering the ABCDs of Complex Questions: Answer-Based Claim Decomposition for Self-Evaluating LLMs
Preprint
Nishant Balepur, Jie Huang, Samraj Moorjani, Kevin Chen-Chuan Chang, Hari Sundaram

INDUSTRY EXPERIENCE

- **Adobe** San Jose, CA
Research Scientist Intern: LLM Agents/Debate, Retrieval, Factuality
May 2024 - Aug 2024
- **Meta** Menlo Park, CA
Software Engineering Intern
May 2022 - Aug 2022
- **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

STUDENTS MENTORED

- **Matthew Shu** (B.S. Yale), 2023-Present, LLMs in Education
First-authored paper under review
- **Jerry He** (HS Student), 2024-Present, Crossword Generation with LLMs

PROFESSIONAL SERVICE

- **Conference Reviewer** UMD
Reviewer for: ACL 2023, ARR 2023-Present, LREC 2024
2022-Present
- **Visiting Student Day Volunteer** UMD
Volunteer and ambassador for UMD's visiting student day
Mar 2024
- **Winter Storm LLM Workshop** UMD
Led a 5-day workshop on LLMs for non-CS graduate students
Jan 2023
- **Computer Science and Statistics Student Ambassador** UIUC
Mentor of new students and volunteer for computer science and statistics events
Aug 2022 - May 2023
- **SIGNLL** UIUC
President of Special Interest Group for Natural Language Learning
Aug 2020 - May 2021
- **Co-founder of Project: Code** UIUC
Co-founder of student organization to help students build computer science projects
Aug 2019 - May 2021

HONORS AND AWARDS

- **NSF Graduate Research Fellowship Program (GRFP)** April 2023 - April 2028
Provided \$159,000 for 3 Years of Fully-Funded Ph.D. Support
- **MASC-SSL 2024 Best Paper Award** April 2024
Selected for one of three (4%) best paper awards for "Artifacts or Abduction"
- **Cohere for AI Research Grant Program** April 2024
Provided \$1,000 from Cohere for AI to support the KARL research project
- **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