Nishant Balepur

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Research Summary

I am a computer science Ph.D. student at the University of Maryland, advised by Professors Jordan Boyd-Graber and Rachel Rudinger. I am interested in developing text generation and question answering systems that help users achieve their goals, with a focus on improving factuality, reasoning, preferences-based alignment, and model/dataset evaluations.

Education

- **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
  Thesis (Proposed): Looks Can Be Deceiving: Teaching QA Systems to Reason and Truly Help Users
  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

- 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

* denotes equal contribution, † denotes mentored student

- Which of These Best Describes Multiple Choice Evaluations? 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 Wiegreffe, 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

- **Allen Institute for AI (Ai2)** — San Jose, CA
  Research Scientist Intern: Semantic Scholar — May 2025 - Aug 2025
- **Adobe** — San Jose, CA
  Research Scientist Intern: Document Intelligence (Multi-LLM Summarization) — May 2024 - Aug 2024
  Outcome: Patent Submission, Paper at NAACL 2025
- **Meta** — Menlo Park, CA
  Software Engineering Intern: Facebook Creators Well-being (Comment Filtering) — May 2022 - Aug 2022
  Outcome: 15% drop in negative interactions among Facebook's 1 billion users

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), 2024-2025, Crossword Generation with LLMs

Professional Service

- **Conference Reviewer** — UMD
  Reviewer for: *ACL/ARR 2023-Present, COLING 2024, IEEE TASLP 2024, TrustNLP 2024 — 2022-2024
  Great Reviewer Nomination: April, June, August 2024 ARR
  Outstanding Reviewer: EMNLP 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