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, Hal Daumé III, and Rachel Rudinger. I am interested in the intersection of natural language processing, information retrieval, and AI safety, where I research 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, Hal Daumé III, 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 Diyi Yang, Jiawei Han, Kevin Chen-Chuan Chang, Hari Sundaram

  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

- 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

- Expository Text Generation: Imitate, Retrieve, Paraphrase
  arXiv:2305.03276
  Nishant Balepur, Jie Huang, Kevin Chen-Chuan Chang

- 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** — UIUC
  Professor Jordan Boyd-Graber — *Aug 2023 - Present*
  - Improving user knowledge acquisition in flashcard-based apps through human-LLM collaboration
  - Studying the capability of LLMs to perform process-of-elimination style reasoning

- **Forward Data Lab** — UIUC
  Professor Kevin Chen-Chuan Chang — *Aug 2021 - June 2023*
  - Investigating methods to improve the factuality, truthfulness, and reliability of LLMs
  - Resulted in three EMNLP 2023 submissions

- **Data Mining Group** — UIUC
  Professor Jiawei Han — *Aug 2022 - June 2023*
  - Developing models for discovering patterns in large, unlabled document collections, including topic evolutions and hierarchical relations
  - Resulted in Findings of ACL 2023 conference paper

WORK EXPERIENCE

- **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*

Honors and Awards

- **NSF Graduate Research Fellowship Program (GRFP)** — April 2023 - April 2028
  Provided 3 Years of Support over a 5 Year Period
- **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

Student Organizations and Service

- **Computer Science Student Ambassador** — UIUC
  Siebel Center for Computer Science — *Sep 2021 - May 2023*
- **Statistics Student Ambassador** — UIUC
  Department of Statistics — *Sep 2021 - May 2023*
- **Chair of Special Interest Group for Natural Language Learning** — UIUC
  Association of Computing Machinery — *Aug 2020 - Dec 2021*
- **Co-founder of Project: Code** — UIUC
  Association of Computing Machinery — *Aug 2019 - May 2021*