KALPESH KRISHNA

kalpesh@cs.umass.edu ♦ LinkedIn ♦ Github ♦ Twitter ♦ Google Scholar ♦ Semantic Scholar **WEBPAGE**: https://martiansideofthemoon.github.io

EDUCATION

University of Massachusetts, Amherst

Sept '18 - Present

MS/PhD in Computer Science (advised by *Prof. Mohit Iyyer*)

Major GPA: 4.0/4.0

Indian Institute of Technology, Bombay

July '14 - July '18

B.Tech in Electrical Engineering, Minor in Computer Science

(advised by *Prof. Preethi Jyothi*)

Major GPA: 9.74/10 (2nd among 66 students), Minor GPA: 10/10

INTERNSHIPS

Allen Institute for Artificial Intelligence (AI2)

Research Intern under Kyle Lo, Arman Cohan, Pradeep Dasiqi

Seattle, WA

June '22 - August '22

Google Research Language

Student Researcher under John Wieting

October '21 - May '22 Amherst, MA (remote)

Google Research India

Research Intern under Partha Talukdar and Bidisha Samanta

June '21 - September '21 Bangalore, India (remote)

Google Brain

Research Intern under Aurko Roy

May '20 - August '20 Mountain View, CA (remote)

Google Research Language

Research Intern under Gaurav Singh Tomar and Ankur Parikh

May '19 - September '19 New York, NY

Toyota Technological Institute at Chicago

Research Intern under Karen Livescu, Liang Lu and Kevin Gimpel

May '17 - July '17 Chicago, IL

Mozilla Foundation

Google Summer of Code Intern under Armen Zambrano

May '16 - August '16 Mumbai, India / London, UK

AWARDS & SCHOLARSHIPS

- Google PhD Fellowship 2021-23 (list of recipients)
- Outstanding Paper Award EACL 2023 (12 out of 1600 submissions)
- PhD Candidacy with Distinction at UMass Amherst (Fall 2020)
- Sharad Maloo Memorial Gold Medal at IIT Bombay Convocation 2018 (For outstanding academic and extra-curricular achievements)
- Cargill Global Leaders Scholarship 2016-18 (Awarded by the IIE and Cargill for academic, extra-curricular and leadership achievements)

PUBLICATIONS AND PREPRINTS

Also see my Google Scholar profile. ACL, ICLR, EMNLP, NAACL, EACL are top-tier peer-reviewed conferences in ML/NLP with an acceptance rate of 20-30%.

Selected Papers:

- 1. FActScore: Fine-grained Atomic Evaluation of Factual Precision in Long Form Text Generation Sewon Min*, Kalpesh Krishna*, Xinxi Lyu, Mike Lewis, Wen-tau Yih, Pang Wei Koh, Mohit Iyyer, Luke Zettlemoyer, Hannaneh Hajishirzi arXiv 2023
- 2. Paraphrasing evades detectors of AI-generated text, but retrieval is an effective defense *Kalpesh Krishna*, Yixiao Song, Marzena Karpinska, John Wieting, Mohit Iyyer arXiv 2023
- 3. LongEval: Guidelines for Human Evaluation of Faithfulness in Long-form Summarization Kalpesh Krishna, Erin Bransom, B. Kuehl, Mohit Iyyer, Pradeep Dasigi, Arman Cohan, Kyle Lo EACL 2023 (Outstanding Paper Award)
- 4. RankGen: Improving Text Generation using Large Ranking Models Kalpesh Krishna, Yapei Chang, John Wieting, Mohit Iyyer EMNLP 2022
- Few-shot Controllable Style Transfer for Low-Resource Multilingual Settings
 Kalpesh Krishna, Xavier Garcia, Deepak Nathani, Bidisha Samanta, Partha Talukdar
 ACL 2022
- 6. Hurdles to Progress in Long-form Question Answering Kalpesh Krishna, Aurko Roy, Mohit Iyyer NAACL 2021
- 7. Reformulating Unsupervised Style Transfer as Paraphrase Generation Kalpesh Krishna, John Wieting, Mohit Iyyer EMNLP 2020
- 8. Thieves on Sesame Street! Model Extraction of BERT-based APIs Kalpesh Krishna, Gaurav S. Tomar, Ankur P. Parikh, Nicolas Papernot, Mohit Iyyer ICLR 2020
- 9. Generating Question-Answer Hierarchies Kalpesh Krishna, Mohit Iyyer ACL 2019

Other Papers:

10. On the Risks of Stealing the Decoding Algorithms of Language Models Ali Naseh, *Kalpesh Krishna*, Mohit Iyyer, Amir Houmansadr CCS 2023

11. ezCoref: Towards Unifying Annotation Guidelines for Coreference Resolution

Ankita Gupta, Marzena Karpinska, Wenlong Zhao, *Kalpesh Krishna*, Jack Merullo, Luke Yeh, Mohit Iyyer, Brendan O'Connor

EACL 2023 (Findings)

12. NL-Augmenter: A Framework for Task-Sensitive Natural Language Augmentation

Kaustubh D. Dhole and others

NEJLT 2023

13. SLING: Sino Linguistic Evaluation of Large Language Models

Yixiao Song, Kalpesh Krishna, Rajesh Bhatt, Mohit Iyyer

EMNLP 2022

14. Document-Level Literary Machine Translation with Parallel Paragraphs from World Literature

Katherine Thai*, Marzena Karpinska*, Kalpesh Krishna, Bill Ray, Moira Inghilleri, John Wieting and Mohit Iyyer

EMNLP 2022

15. RELiC: Retrieving Evidence for Literary Claims

Katherine Thai, Yapei Chang, Kalpesh Krishna, Mohit Iyyer

ACL 2022

16. User and Technical Perspectives of Controllable Code Generation

Stephanie Houde, Vignesh Radhakrishna, Praneeth Reddy, Juie Darwade, Haoran Hu, Kalpesh Krishna, Mayank Agarwal, Kartik Talamadupula, Justin D. Weisz

NeurIPS HCAI workshop 2022 (short paper)

17. Do Long-Range Language Models Actually Use Long-Range Context?

Simeng Sun, Kalpesh Krishna, Andrew Mattarella-Micke and Mohit Iyyer

EMNLP 2021

18. Weakly-Supervised Open-Retrieval Conversational Question Answering

Chen Qu, Liu Yang, Cen Chen, W. Bruce Croft, Kalpesh Krishna and Mohit Iyyer

ECIR 2021

19. Long Document Summarization in a Low Resource Setting using Pretrained Language Models

Ahsaas Bajaj, Pavitra Dangati, *Kalpesh Krishna*, Pradhiksha Kumar, Rheeya Uppaal, Bradford Windsor, Eliot Brenner, Dominic Dotterrer, Rajarshi Das, Andrew McCallum

ACL Student Research Workshop 2021

20. An Analysis of Frame-skipping in Reinforcement Learning

Shivaram Kalyanakrishnan, Siddharth Aravindan, Vishwajeet Bagdawat, Varun Bhatt, Harshith Goka, Archit Gupta, *Kalpesh Krishna*, Vihari Piratla arXiv 2021

21. SunPy: A Python package for Solar Physics

Stuart J. Mumford and others

JOSS 2020

- 22. Syntactically Supervised Transformers for Faster Neural Machine Translation Nader Akoury, *Kalpesh Krishna*, Mohit Iyyer ACL 2019
- 23. Trick or TReAT: Thematic Reinforcement for Artistic Typography Purva Tendulkar, *Kalpesh Krishna*, Ramprasaath R. Selvaraju, Devi Parikh ICCC 2019 (Best Presentation Award)
- 24. Revisiting the Importance of Encoding Logic Rules in Sentiment Classification Kalpesh Krishna, Preethi Jyothi, Mohit Iyyer EMNLP 2018 (short paper)
- 25. Hierarchical Multitask Learning for CTC-based Speech Recognition Kalpesh Krishna, Shubham Toshniwal, Karen Livescu arXiv 2018
- 26. A Study of All-Convolutional Encoders for Connectionist Temporal Classification Kalpesh Krishna, Liang Lu, Kevin Gimpel, Karen Livescu ICASSP 2018 (Awarded SPS Travel Grant)

Other Projects: https://martiansideofthemoon.github.io/other_projects/

INVITED TALKS

- Allen Institute for Artificial Intelligence, May 2023 (Towards robust long-form text generation systems)
- Google Deepmind, May 2023 (Towards robust long-form text generation systems)
- NVIDIA Applied Deep Learning Research, April 2023 (Towards robust long-form text generation systems)
- Apple Machine Learning Research, March 2023 (Towards robust long-form text generation systems)
- University of Washington, September 2022 (RankGen: Improving Text Generation with Large Ranking Models)
- University of Southern California, July 2021 (On progress in text generation & perils of its evaluation)
- University of Texas at Austin, June 2021 (On progress in text generation & perils of its evaluation)
- Google Research, May 2021 (On long-form question answering)
- IBM Research, April 2020 (On model extraction attacks on BERT-based APIs)
- AllenNLP Summit at AI2, August 2019 (Lightning talks on using AllenNLP for education)
- UMass Data Science Research Symposium, April 2019 (On hierarchical question-answer generation)

- Program Committee / Reviewer for 70+ total papers in EMNLP '19-22; ACL '19-'23; ICLR '21-'23; NAACL '19-'22; NeurIPS '21-'22; ICML '23, EACL '23; IJCV '19 and several workshops Outstanding / Highlight Reviewer at ACL 2020, 2022; ICLR 2021, 2022 (Top 7-12% reviewers)
- Student Volunteer at ACL '19 (awarded ACL 2019 Student Scholarship), AKBC '19, ICLR '20

TEACHING / MENTORING / OTHER SERVICE

- Co-organized a weekly talk series "Machine Learning and Friends Lunch" at UMass (2019-22)
- Mentored five UMass undergraduates on their honors thesis (2019-2021) and four student teams for the industrial mentorship projects (COMPSCI 696) in Spring 2019-2022
- Graduate Teaching Assistant at UMass Amherst for Deep Learning for NLP (Spring 2019) and Advanced Natural Language Processing (Fall 2020)
- Institute Student Mentor at IIT Bombay (2017-18)
- Manager, Web and Coding Club at IIT Bombay (2016-17)

 Awarded the Institute Organizational Color 2016-17 at IIT Bombay for achievements while leading the Web and Coding Club
- Teaching Assistant at IIT Bombay in Computer Programming (2016) and Linear Algebra (2017)
- Web Coordinator for Mood Indigo 2016 at IIT Bombay

OTHER ACHIEVEMENTS

- CICS Graduate Fellowship 2018, Victor Lesser Graduate Scholarship 2019 at UMass Amherst
- Selected for JSALT '17, organized by JHU's Center for Language and Speech Processing²
- Institute Academic Prize 2015-16 at IIT Bombay
- Top 10 at the Astronomy Olympiad's Indian Selection Camp for IOAA '14, (20000 candidates)
- All India Rank 93 in JEE Advanced '14 (out of 126,000 candidates)
 All India Rank 34 in JEE Mains '14 (out of 1,400,000 candidates)
 All India Top 100 in CBSE XII '14 (out of 1,000,000 candidates)
 All India Rank 2 in ICSE '12 (out of 132,000 candidates)

Awarded by Pune city institutions for being the city topper in each of these exams. Featured in the Pune city editions of several newspapers including The Times of India and The Indian Express.

- Passed the National Standard Exam in Physics '14 and National Standard Exam in Chemistry '14, the first rounds in the Indian selection procedure for the International Physics Olympiad and the International Chemistry Olympiad respectively
- Selected for the Kishore Vaigyanik Protsahan Yojana (KVPY) Award '14 (1,000/20,000 applicants)

²Couldn't attend due to clashing college schedule

EXTRA-CURRICULAR

- Board Member of the Hampshire Bird Club in Massachusetts (2022-24)
- Blogging Active blogger on MS/PhD applications, biking, bird photography and computer science
- Led the development of a beginner's programming wiki with the Web and Coding Club, IIT Bombay
- StackOverflow Active contributor in 2016-17, top 6% overall
- Open Source Actively contributed to Mozilla in 2015-16 including QoC 2015, GSoC 2016
- Karate Black Belt (1st Dan) trained in Kyokushin Kai for seven years, district level winner
- Abacus & Mental Arithmetic Aloha grandmaster, national and state level winner

Hobbies — birdwatching, macro & bird photography, hiking, biking, reading, star gazing