

Kabir Ahuja

PhD Student, University of Washington

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Education

Present Sept 2023	University of Washington PhD, Computer Science and Engineering	Seattle, US
May 2019 Aug 2015	Birla Institute of Technology and Science (BITS) Pilani B.E. (Hons.), Chemical Engineering CGPA: 9.45/10 (Distinction) Department Rank: 1 / 70 (approx.) Thesis Title: Learning To Optimize Molecular Geometries Using Reinforcement Learning	Pilani, India

Experience

Nov 2025 June 2025	Google DeepMind <i>Student Researcher</i> Advisors: Dr. Andrew Lampinen , Dr. Yuxuan Li Worked on multi-modal multi-agent environments for investigating Large Language Models' capabilities for creative communication and subtext.	Mountain View, CA, US
June 2023 Aug 2021	Microsoft Research <i>Research Fellow</i> 🌐 Advisors: Dr. Sunayana Sitaram , Dr. Monojit Choudhury , Dr. Navin Goyal Worked on understanding in-context learning in language models through a Bayesian perspective. Also worked on building linguistically fair Multilingual Models covering different aspects around their performance, calibration, evaluation, interpretation and data collection.	Bangalore, India
Aug 2021 July 2020	Udaan.com <i>Data Scientist</i> Mentor: Dr. Mohit Kumar Worked on implementing and deploying Recommendation Systems to solve numerous use cases across various verticals of the company.	Bangalore, India
July 2020 Jan 2020	Microsoft Research <i>Research Intern</i> Advisor: Dr. Navin Goyal Worked on analyzing and contrasting the capabilities of Recurrent Neural Networks and Transformers in recognizing Formal Languages.	Bangalore, India
Dec 2019 June 2019	Indian Institute of Science MALL Lab 🌐 <i>Research Assistant</i> Advisor: Dr. Partha Talukdar Worked on controlled text generation for generating paraphrases of sentences while following a specified syntactic structure provided in the form of an exemplar sentence.	Bangalore, India
Dec 2018 Aug 2018	Massachusetts Institute of Technology Green Research Group 🌐 <i>Visting Student Researcher</i> Advisors: Prof. William H. Green , Prof. Yi-Pei Li Worked on devising Reinforcement Learning based methods for Molecular Geometry Optimization for efficiently finding the local minima of non-convex energy surfaces.	Cambridge, MA, USA

Publications

S=In Submission, C=Conference, W=Workshop, J=Journal

- [C.10] **Finding Flawed Fictions: Evaluating Complex Reasoning in Language Models via Plot Hole Detection** 🌐
[code]
[Kabir Ahuja](#), Melanie Sclar, Yulia Tsvetkov
Accepted in *Conference on Language Modeling* [CoLM'25]
- [J.3] **Learning Syntax Without Planting Trees: Understanding When and Why Transformers Generalize Hierarchically** 🌐 [code]
[Kabir Ahuja](#), Vidhisha Balachandran, Madhur Panwar, Tianxing He, Noah A. Smith, Navin Goyal, Yulia Tsvetkov
Accepted in *Transactions of the Association for Computational Linguistics* [TACL]
- [C.9] **DIALECTBENCH: An NLP Benchmark for Dialects, Varieties, and Closely-Related Languages** 🌐 [code]
Fahim Faisal, Orevaoghene Ahia, Aarohi Srivastava, [Kabir Ahuja](#), David Chiang, Yulia Tsvetkov, Antonios Anastopoulos
Association for Computational Linguistics [Best Social Impact Paper Award] [ACL'24]

- [C.8] **In-Context Learning through the Bayesian Prism** [🔗][code]
Kabir Ahuja*, Madhur Panwar*, Navin Goyal
The Twelfth International Conference on Learning Representations, Vienna [ICLR'24]
- [C.7] **MEGA: Multilingual Evaluation of Generative AI** [🔗][code]
Kabir Ahuja, et al.
The 2023 Conference on Empirical Methods in Natural Language Processing, Singapore [EMNLP'23]
- [C.6] **On Calibration of Massively Multilingual Language Models** [🔗][code]
Kabir Ahuja, Sunayana Sitaram, Sandipan Dandapat, Monojit Choudhury
The 2022 Conference on Empirical Methods in Natural Language Processing, Abu Dhabi [EMNLP'22]
- [C.5] **Global Readiness of Language Technology for Healthcare: What would it Take to Combat the Next Pandemic?** [🔗]
Ishani Mondal*, Kabir Ahuja*, Mohit Jain, Jacki O'Neill, Kalika Bali, Monojit Choudhury
The 29th International Conference on Computational Linguistics, Gyeongju, Republic of Korea [COLING'22]
- [C.4] **On the Economics of Multilingual Few-shot Learning: Modeling the Cost-Performance Trade-offs of Machine Translated and Manual Data** [🔗][code]
Kabir Ahuja, Monojit Choudhury, Sandipan Dandapat
2022 Annual Conference of the North American Chapter of the Association for Computational Linguistics, Seattle [NAACL'22]
- [C.3] **Multi Task Learning For Zero Shot Performance Prediction of Multilingual Models** [🔗]
Kabir Ahuja*, Shanu Kumar*, Sandipan Dandapat, Monojit Choudhury
60th Annual Meeting of the Association for Computational Linguistics, Dublin, Ireland [ACL'22]
- [C.2] **On the Practical Ability of Recurrent Neural Networks to Recognize Hierarchical Languages** [🔗][code]
Satwik Bhattamishra, Kabir Ahuja, Navin Goyal
28th International Conference on Computational Linguistics [Best Short Paper Award] [COLING'20]
- [C.1] **On the Ability and Limitations of Transformers to Recognize Formal Languages** [🔗][code]
Satwik Bhattamishra, Kabir Ahuja, Navin Goyal
2020 Conference on Empirical Methods in Natural Language Processing [EMNLP'20]
- [J.2] **Learning to Optimize Molecular Geometries Using Reinforcement Learning** [🔗]
Kabir Ahuja, William H. Green, Yi-Pei Li
Journal of Chemical Theory and Computation [Impact Factor: 6.006] [JCTC]
- [J.1] **Syntax-Guided Controlled Generation of Paraphrases** [🔗][code]
Ashutosh Kumar, Kabir Ahuja, Raghuram Vadapalli, Partha Talukdar
Transactions of the Association for Computational Linguistics [TACL]
- [W.2] **The SUMEval 2022 Shared Task on Performance Prediction of Multilingual Pre-trained Language Models** [🔗][code]
Kabir Ahuja, Antonios Anastasopoulos, Barun Patra, Graham Neubig, Monojit Choudhury, Sandipan Dandapat, Sunayana Sitaram, Vishrav Chaudhary
First Workshop on Scaling Up Multilingual Evaluation, AACL, Online [SumEval@AACL'22]
- [W.1] **Beyond Static models and test sets: Benchmarking the potential of pre-trained models across tasks and languages** [🔗]
Kabir Ahuja, Sandipan Dandapat, Sunayana Sitaram, Monojit Choudhury
NLP Power! The First Workshop on Efficient Benchmarking in NLP, ACL, Dublin [NLPPower@ACL'22]

Honours and Awards

Best Social Impact Award in ACL 2024 For our paper: DIALECTBENCH: An NLP Benchmark for Dialects, Varieties, and Closely-Related Languages

Best Short Paper Award in COLING, 2020 [🔗] For our paper: On the Practical Ability of Recurrent Neural Networks to Recognize Hierarchical Languages

Academic Service

Workshop Co-Organizer SumEval Workshop at AACL'22

Peer Reviewer CoLM 2025, CoLM 2024, ARR October'22, AAAI'23, EMNLP'22, NAACL'22, ACL'22

Teaching and Volunteering Roles

CSE 599J The New AI Story: Empowering Humans in the Age of Machines, University of Washington	<i>Course Staff</i>	
Jan'26 - Dec'26		
CSE 447 / M 547 Natural Language Processing, University of Washington	<i>Teaching Assistant</i>	Sep'25 - Dec'25
CSE 447 / M 547 Natural Language Processing, University of Washington	<i>Teaching Assistant</i>	Sep'25 - Dec'25
CSE 447 / M 547 Natural Language Processing, University of Washington	<i>Teaching Assistant</i>	Sep'24 - Dec'24
Natural Language Processing, Plaksha University	<i>Teaching Assistant</i>	Jan'22 - Apr'22
Neural Networks and Fuzzy Logic, BITS Pilani	<i>Head Teaching Assistant</i>	Jan'19 - May'19
National Service Scheme, BITS Pilani	<i>School Volunteer and Class Head</i>	Aug'15 - May'17