


Archiki PRASAD

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RESEARCH INTERESTS

My research goal is to build natural language processing systems that can reason in an efficient, robust, and interpretable manner.

Major Interests: Reasoning, Post-Training, Reward Modeling, Self-Supervised Learning.

Other Interests: Compositional Learning, Robustness, Explainability.

EDUCATION

Present Aug 2021	The University of North Carolina, CHAPEL HILL, USA <i>Ph.D. in Computer Science</i> Advisor: Mohit Bansal Concentration: Natural Language Processing
May 2021 August 2016	Indian Institute of Technology Bombay, MAHARASHTRA, India Bachelor + Master of Technology, Major: Electrical Engineering GPA: 9.66/10 Minor: Computer Science and Engineering

EXPERIENCE

Aug 2025 May 2025	Google DeepMind, SEATTLE, US <i>Student Researcher</i> Advisors: Pete Shaw , Kenton Lee , Mandar Joshi ➤ Developing metrics to evaluate and measure the utility of chain-of-thought rationales
Aug 2024 May 2024	Fundamental AI Research Labs, Meta, NEW YORK CITY, US <i>Research Scientist Intern</i> Advisors: Jason Weston , Maryam Fazel-Zarandi ➤ Enabling LLMs to learn to reason in an iterative and unsupervised manner
Aug 2023 May 2023	Allen Institute of Artificial Intelligence (AI2), SEATTLE, US <i>Research Intern</i> Advisors: Tushar Khot , Ashish Sabharwal , Peter Clark ➤ Designed an adaptive task decomposition framework for LLM agents on interactive tasks
Aug 2022 May 2022	Adobe Research, SAN JOSE (REMOTE), US <i>Research Scientist Intern (NLP)</i> Advisors: Trung Bui , David Yoon , Franck Dernoncourt ➤ Developed a challenging benchmark on extracting question-answer pairs from meeting transcripts

PUBLICATIONS

2025 Archiki Prasad, Elias Stengel-Eskin, Justin Chih-Yao Chen, Zaid Khan, Mohit Bansal “*Learning to Generate Unit Tests for Automated Debugging*” In Proceedings of the second Conference of Language Modeling (**COLM 2025**) [PDF]

2025 Archiki Prasad, Weizhe Yuan, Richard Yuanzhe Pang, Jing Xu, Maryam Fazel-Zarandi, Mohit Bansal, Sainbayer Sukhbaatar, Jason Weston, Jane Yu “*Self-Consistency Preference Optimization*” In Proceedings of the forty-second International Conference on Machine Learning (**ICML 2025**) [PDF]

2025 Swarnadeep Saha, Archiki Prasad, Justin Chih-Yao Chen, Peter Hase, Elias Stengel-Eskin, Mohit Bansal “*System-1.x: Learning to Balance Fast and Slow Planning with Language Models*” In Proceedings of the thirteenth International Conference on Learning Representations (**ICLR 2025**) [PDF]

2025 Han Wang, Archiki Prasad, Elias Stengel-Eskin, Mohit Bansal “*ADACAD: Adaptively Decoding to Balance Conflicts between Contextual and Parametric Knowledge*” In Proceedings of the North American Chapter of the Association for Computational Linguistics (**NAACL 2025**) [PDF]

2025 Duy Nguyen*, Archiki Prasad*, Elias Stengel-Eskin, Mohit Bansal “*LASER: Learning to Adaptively Select Reward Models with Multi-Armed Bandits*” In Proceedings of the Annual Conference on Neural Information Processing Systems (**NeurIPS 2025**) [PDF]

2024 Elias Stengel-Eskin*, Archiki Prasad*, Mohit Bansal “*REGAL: Refactoring Programs to Discover Generalizable Abstractions*” In Proceedings of the forty-first International Conference on Machine Learning (**ICML 2024**) [PDF]

2024 Archiki Prasad, Elias Stengel-Eskin, Mohit Bansal “*Rephrase, Augment, Reason: Visual Grounding of Questions for Vision-Language Models*” In Proceedings of the twelfth International Conference on Learning Representations (**ICLR 2024**) [PDF]

2024 Archiki Prasad, Alexander Koller, Mareike Hartmann, Peter Clark, Ashish Sabharwal, Mohit Bansal, Tushar Khot “*ADAPT: As-Needed Decomposition and Planning with Language Models*” In Findings of Conference of the North American Chapter of the Association for Computational Linguistics (**Findings of NAACL 2024**) [PDF]

2024 Han Wang*, **Archiki Prasad***, Elias Stengel-Eskin*, Mohit Bansal “*Soft Self-Consistency Improves Language Model Agents*” In Proceedings of the Annual Conference of the Association for Computational Linguistics (**ACL 2024**) [PDF]

2024 Justin Chih-Yao Chen, **Archiki Prasad**, Swarnadeep Saha, Elias Stengel-Eskin, Mohit Bansal “*MAGICoRE: Multi-Agent, Iterative, Coarse-to-Fine Refinement for Reasoning*” In Proceedings of the Conference on Empirical Methods in Natural Language Processing (**EMNLP 2025**) [PDF]

2023 **Archiki Prasad**, Swarnadeep Saha, Xiang Zhou, Mohit Bansal “*RECEVAL: Evaluating Reasoning Chains via Correctness and Informativeness*” In Proceedings of Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023**) [PDF]

2023 **Archiki Prasad**, Trung Bui, Seunghyun Yoon, Hanieh Deilamsalehy, Franck Dernoncourt, Mohit Bansal “*MEETINGQA: Extractive Question-Answering on Meeting Transcripts*” In Proceedings of the Annual Conference of the Association for Computational Linguistics (**ACL 2023**) [PDF]

2023 **Archiki Prasad**, Peter Hase, Xiang Zhou, Mohit Bansal “*GRIPS: Gradient-free, Edit-based Instruction Search for Prompting Large Language Models*” In Proceedings of the Conference of the European Chapter of the Association for Computational Linguistics (**EACL 2023**) [PDF]

2021 **Archiki Prasad***, Mohammad Ali Rehan*, Shreya Pathak*, Preethi Jyothi “*The Effectiveness of Intermediate-Task Training for Code-Switched Natural Language Understanding*” In Proceedings of the Workshop on Multilingual Representation Learning (**MRL 2021**) at EMNLP 2021 [PDF] (**Best Paper Honorable Mention**)

2021 **Archiki Prasad**, Preethi Jyothi, Rajbabu Velmurugan “*An Investigation of End-to-End Models for Robust Speech Recognition*” In Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2021**) [PDF]

2021 **Archiki Prasad**, Vishal Jain, Sharayu Moharir “*Decentralized Age-of-Information Bandits*” In Proceedings of the IEEE Wireless Communications and Networking Conference (**WCNC 2021**) [PDF]

2020 **Archiki Prasad**, Preethi Jyothi “*How Accents Confound: Probing for Accent Information in End-to-End Speech Recognition Systems*” In Proceedings of the 2020 Annual Conference of the Association for Computational Linguistics (**ACL 2020**) [PDF]

2020 Ayush Chauhan, **Archiki Prasad**, Parth Gupta, Amireddy Prashanth Reddy, Shiv Kumar Saini “*Time Series Forecasting for Cold-Start Items by Learning from Related Items using Memory Networks*” In Companion Proceedings of the Web Conference 2020 (**WWW 2020**) [PDF]

PATENTS

2022 Ayush Chauhan, Shiv Kumar Saini, Parth Gupta, **Archiki Prasad**, Amireddy Prashanth Reddy, and Ritwick Chaudhry “*Key-value memory network for predicting time-series metrics of target entities*” US Patent and Trademarks Office 2022 | Adobe Inc. [US11501107]

INVITED TALKS

Microsoft Turing Speaker Series

SPRING 2024

“As-Needed Decomposition and Planning with Language Models” [slides]

HONORS AND AWARDS

- > Recipient of the **2025 Apple Scholars in AI/ML PhD fellowship**, awarded to 21 students worldwide, with full funding for up to 2 years
- > IIT Bombay Institute Academic Prize for outstanding performance in the academic year 2019-20
- > Secured an all India rank of 144 in JEE-Main 2016 out of roughly 10 million applicants.
- > Amongst top 1.2% of all selected candidates (200,000) JEE-Advance 2016.

PROFESSIONAL SERVICES

Conference Reviewer

- > EMNLP 2021-2025
- > ACL 2022-2025 (ACL Rolling Review)
- > NAACL 2022-2025 (ACL Rolling Review)
- > ICLR, ICML, COLM, NeurIPS 2025

REFERENCES

- > **Mohit Bansal**, John R. Louise S. Parker Professor of CS, UNC Chapel Hill.
- > **Jason Weston**, Senior Director Research Scientist, FAIR Labs, Meta, NYC.
- > **Tushar Khot**, Lead Research Scientist, Allen Institute of Artificial Intelligence, Seattle.
- > **Ashish Sabharwal**, Principal Research Scientist, Allen Institute of Artificial Intelligence, Seattle.