


Archiki PRASAD

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RESEARCH INTERESTS

My research goal is to make natural language processing systems more scalable, robust, and interpretable.

Major Interests: Prompt-based Learning, Reasoning, Robustness, Explainability.

Other Interests: Fairness, Self-Supervised Learning, Commonsense Reasoning, Multilinguality.

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

Present Aug 2021	UNC-NLP Research Group, UNC CHAPEL HILL, US <i>Research Assistant</i> Advisor: Mohit Bansal <ul style="list-style-type: none">Working on prompt-based learning methodsWorking on consistency and reasoning with language models
Aug 2022 May 2022	Adobe Research, SAN JOSE (REMOTE), US <i>Research Scientist Intern (NLP)</i> Advisors: Trung Bui , David Yoon , Franck Dernoncourt <ul style="list-style-type: none">Working on extracting question-answer pairs from meeting transcripts
May 2021 Aug 2019	Computational Speech And Language Technologies (CSALT) Lab, IIT BOMBAY, India <i>Research Assistant</i> Advisor: Preethi Jyothi <ul style="list-style-type: none">Intermediate-task training for natural language understanding tasks in code-switched languagesProbing accent information in black-box end-to-end automatic speech recognition systemsJoint noise and accent robustness in automatic speech recognition systems
Jan 2021 Jan 2020	Indian Institute of Technology Bombay, MAHARASHTRA, India <i>Research Assistant</i> Advisor: Sharayu Moharir <ul style="list-style-type: none">Worked on designing scheduling policies using multi-armed bandits
Jul 2019 May 2019	Adobe Research, BANGALORE, India <i>Research Intern</i> Advisor: Shiv Kumar Saini <ul style="list-style-type: none">Worked on time-series forecasting in low/zero-data settings using memory-augmented networks

PUBLICATIONS

2022 Archiki Prasad, Peter Hase, Xiang Zhou, Mohit Bansal “GRIPS: Gradient-free, Edit-based Instruction Search for Prompting Large Language Models” Arxiv Preprint 2022 [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 2021 Workshop on Multilingual Representation Learning (MRL 2021) at EMNLP 2021 [PDF] ([Best Paper Honorable Mention](#))

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

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

2020 Archiki Prasad, and 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, and 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](#)]

PROFESSIONAL SERVICES

Conference Reviewer

- › EMNLP 2021
- › ACL 2022 (ACL Rolling Review)
- › NAACL 2022 (ACL Rolling Review)
- › EMNLP 2022

SCHOLASTIC ACHIEVEMENTS AND AWARDS

- › IIT Bombay Institute Academic Prize for outstanding performance in the academic year 2019-20
- › Amongst top 1.2% of all selected candidates (200,000) JEE-Advance 2016.
- › Amongst top 0.1% of all candidates in JEE-Mains 2016.
- › Google participation award for MRL 2021.
- › Selected to attend the Natural Language Understanding track of the Google AI summer school conducted by Google Research India
- › Advanced Performer's grade (about top 1% of class) in Linear Algebra and Economics

RELEVANT COURSEWORK

* = Graduate Level Courses

Mathematics: Linear Algebra*, Real Analysis, Complex Analysis, Multivariate Calculus, Differential Equations

Computer Science: Computer Programming, Data Structures and Algorithms, Operating Systems, Computer Organization, Digital Logic

Machine Learning: Machine Learning*, Structured Prediction*, Language and Learning*, Large Language Models*, Information Theory and Coding*, Automatic Speech Recognition*, Natural Language Processing (online), Digital Image Processing

Probability and Statistics: Probability and Random Processes, Data Analysis and Interpretation, Concentration Inequalities*

SKILLS

Programming Languages: C/C++, Python, R, bash
SW/ Tools: MATLAB, Scilab, Git, Docker, \LaTeX , Arduino, Quartus
ML Libraries: TensorFlow, PyTorch, Keras, NumPy, OpenCV, Pandas, Scikit Learn