# 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: Robustness, Interpretability, Explainability, Prompt-based Learning

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

# **EDUCATION**

Aug 2021	Ph.D. in Computer Science   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: 9.64 Minor: Computer Science and Engineering

#### EXPERIENCE

Present Aug 2021	<ul> <li>UNC-NLP Research Group, UNC CHAPEL HILL, US</li> <li>Research Assistant   Supervisor: Prof. Mohit Bansal</li> <li>Working on prompt-based learning methods</li> </ul>
May 2021 Aug 2019	Computational Speech And Language Technologies (CSALT) Lab, IIT BOMBAY, India  Research Assistant   Advisor: Prof. Preethi Jyothi  Intermediate-task training for natural language understanding tasks in code-switched languages  Probing accent information in black-box end-to-end automatic speech recognition systems  Joint noise and accent robustness in automatic speech recognition systems
Jan 2021 Jan 2020	<ul> <li>Indian Institute of Technology Bombay, MAHARASHTRA, India</li> <li>Research Assistant   Advisor: Prof. Sharayu Moharir</li> <li>Worked on designing scheduling policies using multi-armed bandits</li> </ul>
Jul 2019 May 2019	Adobe Research, BANGALORE, India Research Intern   Advisor: Dr. Shiv Kumar Saini > Worked on time-series forecasting in low/zero-data settings using memory-augmented networks

## **PUBLICATIONS**

**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 (MLR 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, Amiredddy Prashanth Reddy, and Shiv Kumar Saini *"Time Series Fore-casting for Cold-Start Items by Learning from Related Items using Memory Networks"* In Companion Proceedings of the Web Conference 2020 **(WWW 2020)** [PDF]

### PATENTS

**2020** Ayush Chauhan, Shiv Kumar Saini, Parth Gupta, **Archiki Prasad**, Amireddy Prashanth Reddy, Ritwick Chaudhry "Keyvalue memory network for predicting time-series metrics of target entities" US Patent and Trademarks Office 2020 | Adobe Inc. [APPLICATION NO. US16/868942]

## PROFESSIONAL SERVICES

#### **Conference Reviewer**

- > EMNLP 2021
- > ACL 2021 (ACL Rolling Review)
- > NAACL 2021 (ACL Rolling Review)

## 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

Machine Learning: Machine Learning\*, Structured Prediction\*, Language and Learning\*, 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, HTML

SW/ Tools: MATLAB, Scilab, Git, Docker, ŁTFX, Arduino, Quartus

ML Libraries: TensorFlow, PyTorch, Keras, NumPy, OpenCV, Pandas, Scikit Learn