Rachit Bansal

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RESEARCH INTERESTS

Interpretability and Explainability, Robustness, Computional Linguistics, Neural Machine Translation, Transfer Learning, Representation Learning

TECHNICAL SKILLS

Languages: Python, C++, C, JavaScript, MATLAB, HTML/CSS, Unix Shell Scripting
Frameworks: PyTorch, Tensorflow, HuggingFace, FairSeq, Flask
Miscellaneous: Selenium, Seaborn, Material Design, Bootstrap, MongoDB

EDUCATION

Delhi Technological University — New Delhi, India
Bachelor of Technology **(B.Tech)** in Electrical Engineering — July 2022 (expected)
CPI: 8.84/10

RESEARCH EXPERIENCE

Adobe, Media and Data Science Research (MDSR)
Research Intern (Host: Balaji Krishnamurthy) — Nov 2020 - Sept 2021

IIIT Delhi, Laboratory for Computational Social Systems (LCS2)
Research Intern (Advisor: Dr. Tanmoy Chakraborty) — May 2020 - April 2021

University of Oxford, Cuneiform Digital Library Initiative (CDLI)
Research Intern (Advisors: Dr. Jacob Dahl and Dr. Niko Schenk) — Summer 2020

PUBLICATIONS

[1] *Evaluating Explanations: How much do explanations from the teacher aid students?*
Danish Pruthi, Rachit Bansal, Bhuvam Dhingra, Livio Baldini Soares, Michael Collins, Zachary C. Lipton, Graham Neubig, William W. Cohen.
Transactions of the Association for Computational Linguistics (**TACL**) (conditionally accepted)

[2] *CoSe-Co: Text Conditioned Generative CommonSense Contextualizer*
Rachit Bansal, Milan Aggarwal, Sumit Bhatia, Jivat Kaur, Balaji Krishnamurthy.
– Workshop on Commonsense Reasoning and Knowledge Bases (**CSKB**) at **AKBC**, 2021 [Print]
– International Conference on Learning Representations (**ICLR**), 2022 (under review)

[3] *No Need to Know Everything! Efficiently Augmenting Language Models With External Knowledge*
Jivat Kaur, Sumit Bhatia, Milan Aggarwal, Rachit Bansal, Balaji Krishnamurthy.
Workshop on Commonsense Reasoning and Knowledge Bases (**CSKB**) at **AKBC**, 2021 [Print]

[4] *How Low is Too Low? A Computational Perspective on Extremely Low-Resource Languages*
Rachit Bansal, Himanshu Choudhary, Ravneet Punia, Niko Schenk, Jacob L Dahl, Émilie Pagé-Perron.
ACL-IJCNLP Student Research Workshop (**SRW**), 2021 [Print, Slides, Video]

[5] *Combining exogenous and endogenous signals with a co-attention network for early fake news detection*
Rachit Bansal, William Scott, Nidhi Sultan, Tanmoy Chakraborty.
Pacific-Asia Conference on Knowledge Discovery and Data Mining (**PA-KDD**), 2021 [arXiv, Slides]

[6] *Cross-SEAN: A Cross-Stitch Semi-Supervised Attention Model for COVID-19 Fake News Detection*
Rachit Bansal, William Scott, Abhay Kaushik, Tanmoy Chakraborty, Shubhashis Sengupta.
Journal of Applied Soft Computing [arXiv]

TEACHING

Coding Blocks — New Delhi, India

– Student Instructor- Reinforcement Learning (Online) — March 2020 - May 2020
- Recorded 10-hours worth of lectures and held a number of live webinars. Collaborated with course mentors to build project ideas, assignments and quizzes.

– Teaching Assistant- Machine Learning with Deep Learning — June 2019 - August 2019
- Conducted classes and doubt sessions for a batch of 60 senior undergraduate students from all across the country. Built course quizzes and programming assignments in collaboration with other TAs.

ACADEMIC PROJECTS

Evaluating Explanations for NLP
Worked with Danish Pruthi to empirically investigate attribution methods. Established a student-teacher communication paradigm for automatic evaluation of source-side attributions, without the need of human intervention and judgment.

Chrome-SEAN: A Browser Extension to Detect Fake News[1]
Built an easy to use chrome extension based on our research work of detecting misinformation, Cross-SEAN, to predict the possibility of a tweet status being fake.

Gaze localisation to Measure Sustained Attention
Worked in collaboration with Samsung R&D Lab, Noida, under the guidance of Dr. Divyashikha Sethia to curate an image processing module to analyze a person's attention using relative positioning of the target and gaze points on a mobile device.

Power Forecasting using User Behaviour Learning[2]
Worked under the supervision of Dr. Kapil Sharma to integrate parallel functionalities including GHI Prediction, Appliance Scheduling, and Smart Plugs.

AWARDS & HONOURS

Student- LxMLS: 2021
One of the selected students to attend the 11th Lisbon Machine Learning Summer School.

Fellow- Fatima Predoctoral Fellowship, 2021
One of the selected few fellows for the 9-month fellowship, aimed at research collaboration and mentorship for aspiring PhD students.

Literary Prodigy Award, 2015
Awarded by The Young Poets Network, UK, for my endeavours in the field of English Literature.[3]

RELEVANT SERVICE & POSITIONS

- **Volunteer:** NAACL 2021, ICLR 2021, EMNLP 2020, NeurIPS 2020, ICML 2020 & ACL 2020
- **Co-Founder**, Code to School, An initiative to collaborate with schools across the country and teach high school students various programming languages and computer science skills.
- **Mentor**, Tensorflow, Google Code-In
- **ML Lead**, Google Developer Student Club, DTU Chapter
- **Joint Secretary**, Sahitya, the Literary and Debating Society of DTU

[1] ChromeStore/Chrome-SEAN
[2] RachitBansal/Power-Forecasting
[3] Check out some of my **poetry**