

Vaibhav Adlakha

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RESEARCH INTERESTS

I am curious about the interplay of knowledge and language in language models. My research focuses on improving text representations for retrieval-augmented generation (RAG) applications.

EDUCATION

McGill University/Mila - Quebec AI Institute

Ph.D. in Computer Science

Advisor: Prof. Siva Reddy

September 2020 - Present

Current GPA: 4.00

Indian Institute of Technology Guwahati

Bachelor of Technology in Mathematics and Computing

2013-2017

GPA: 8.39/10

SELECTED PUBLICATIONS

[1] **LLM2Vec: Large Language Models Are Secretly Powerful Text Encoders**, (*Under review at COLM '24*) [Paper][Code]

Parishad BehnamGhader*, **Vaibhav Adlakha***, Marius Mosbach, Dzmitry Bahdanau, Nicolas Chapados, Siva Reddy

[2] **Evaluating Correctness and Faithfulness of Instruction-Following Models for Question Answering**, (*TACL '24, will be presented at ACL '24*) [Paper][Code]

Vaibhav Adlakha, Parishad BehnamGhader, Xing Han Lu, Nicholas Meade, Siva Reddy

[3] **TopiOCQA: Open-domain Conversational Question Answering with Topic Switching**, (*TACL '22, presented at ACL '22*) [Paper][Code]

Vaibhav Adlakha, Shehzaad Dhuliawala, Kaheer Suleman, Harm de Vries, Siva Reddy

[4] **OpenIE6: Iterative Grid Labeling and Coordination Analysis for Open Information Extraction**, (*EMNLP '20*) [Paper][Code]

Keshav Kolluru*, **Vaibhav Adlakha***, Samarth Aggarwal, Mausam, Soumen Chakrabarti

See [Semantic Scholar](#) for full list of publications.

PROFESSIONAL EXPERIENCE

ServiceNow Research

Visiting Researcher

Advisors: Dzmitry Bahdanau

Montreal, Canada

March 2023 - Present

We propose a simple parameter and compute efficient recipe to convert any LLM into an instruction-following text encoder [1]. We achieve state-of-the-art among models trained on open-source data.

ServiceNow Research

Visiting Researcher

Advisors: Harm de Vries

Montreal, Canada

August 2021 - July 2022

Worked on constructing a large-scale dataset for conversational question answering [3], and explored methods for making RAG systems robust to misinformation attacks.

Indian Institute of Technology Delhi

Research Assistant

Advisors: Mausam, Srikanta Bedathur

Delhi, India

April 2019 - August 2020

Worked on open information extraction [4] and explored modifying Knowledge Base Completion (KBC) methods for complex queries over knowledge graphs.

Samsung Research Institute Bangalore
Senior Software Engineer, Data Intelligence Group

Bangalore, India
June 2017 - March 2019

- Developed a scalable Information Retrieval Web Portal to draw insights from Market Intelligence data such as blogs and reviews. Implemented Latent Semantic Analysis based on BM25 scoring to achieve 10% increase in CTR.
- Created a centralized Device Knowledge Base. Built a chatbot on top of that Knowledge Base to facilitate information retrieval in natural language, using AWS Lex APIs.

TEACHING EXPERIENCE

Teaching Assistant for COMP 345 - From Natural Language to Data Science

Instructors: Siva Reddy, Tim O'Donnell Winter 2024, Winter 2023, Fall 2021
My responsibilities included giving tutorials, evaluating assignments, holding office hours.

Teaching Assistant for COMP 424 - Artificial Intelligence

Instructor: Jackie Cheung Winter 2022
My responsibilities included evaluating assignments and student projects.

PROFESSIONAL SERVICES

Area Chair: QA Track, EMNLP 2024

Committee Member: DialDoc Workshop (focuses on document-grounded dialogue and conversational question answering), SCAI Workshop: Search-Oriented Conversational AI.

Reviewer: ARR; EMNLP; ACL; DialDoc@ACL