Advait Deshmukh

+1-720-334-4917 | adde1214@colorado.edu | advaitdeshmukh.com

advait-deshmukh | advaitdeshmukh

Boulder, CO, USA

EDUCATION

- **Master of Science, Computer Science**   *Aug 2023 – Dec 2025*
  University of Colorado - Boulder   Boulder, CO
  GPA: 4.0/4.0

- **Bachelor of Engineering, Computer Science**   *Aug 2017 – Aug 2021*
  Birla Institute of Technology and Science, Pilani   Pilani, India
  GPA: 7.1/10

PUBLICATIONS   C=CONFERENCE, S=IN SUBMISSION,

[C.1] Advait Deshmukh, Ashwin Umadi, Dananjay Srinivas, and Maria Leonor Pacheco. 2024. All entities are not created equal: Examining the long tail for fine-grained entity typing. Proceedings of the 14th Joint Conference on Lexical and Computational Semantics 2025, https://aclanthology.org/2025.starsem-1.15.

[S.1] Rohan Das, Advait Deshmukh, Alexandria Leto, Zohar Naaman, I-Ta Lee, and Maria Leonor Pacheco. 2024. A Structured Clustering Approach for Inducing Media Narratives. Recommended to *CL '26.

SELECTED RESEARCH PROJECTS

- **A Structured Clustering Approach for Inducing Media Narratives**   *Spring 2025 – Summer 2025*
  Collaborator   BLAST Lab, CU Boulder
  ◦ Implemented a modified DAPrompt (Xiang et al.) based relationship classifier to extract causally related event pairs across 4 datasets.
  ◦ Infused knowledge from teacher models (Llama3, Qwen3) to aid in domain adaptation.

- **Examining the Long Tail for Fine-Grained Entity Typing**   *Fall 2024 – Spring 2025*
  Independent study advised by Dr. Maria Pacheco   BLAST Lab, CU Boulder
  ◦ Conducted rigorous empirical analysis to study limitations of predominantly popular language model-based approaches for ultra-fine entity typing.
  ◦ Developed proxies to predict entity frequencies based on pretrained language models and analyzed its effect on typing performance.

- **Improving LENS with Knowledge Distillation**   *Spring 2024*
  Independent study advised by Dr. Tom Yeh   BAIC Lab, CU Boulder
  ◦ Devised a selective caption filtering module on top of the approach provided by LENS (Berrios et al.) which enabled text only Large Language Models (LLMs) to "see".
  ◦ Leveraged LLMs and knowledge distillation techniques to train a compact RoBERTa-based classifier model to streamline the filtering process.

- **RealTalk: Real-Time Talk Move Analysis for Online Classrooms**   *Spring 2024*
  Course Project   CSCI 5922, CU Boulder
  ◦ Developed approaches in real-time talkmove analysis to aid online classrooms especially in low-resource settings.
  ◦ Explored quantization strategies for efficient inference while maintaining near-SOTA performance on the task.

- **Black-Box Machine-Generated Text Detection**   *Fall 2023*
  Course Project   CSCI 5832, CU Boulder
  ◦ Developed an ensemble system for SemEval 2023 Task 8 that outperformed the task baseline.
  ◦ The ensemble consisting of RoBERTa, BERT, XLNet, and ELECTRA, achieved an f1 score of 87.6 on dev set.

TEACHING EXPERIENCE

- **University of Colorado Boulder**   *Fall 2024 – Spring 2025*
  Teaching Assistant, CSCI 1300: Intro to Computing   Boulder, CO
  ◦ Assisted in the course by grading, holding recitations & office hours to support students.
  ◦ Collaborated with faculty to redesign course materials, improving student engagement.

- **University of Colorado Boulder**   *Fall 2023 – Spring 2024*
  Course Manager, CSCI 1300: Intro to Computing   Boulder, CO
  ◦ Managed operations for the course, serving over 900 students through office hours and online platform Ed.
  ◦ Collaborated with faculty to create and grade assignments, projects & exams.

PROFESSIONAL EXPERIENCE

- **Societe Generale Global Solution Centre** *Jul 2021 – Jul 2023*
  Software Development Engineer Bangalore, India
  ◦ Developed a Retrieval Augmented Generation (RAG) based chat system to assist support teams in efficiently handling policy queries.
  ◦ Built an innovation portal, generating 120 ideas across 7 departments to foster cross-departmental collaboration.

- **Centre for Development of Advanced Computing (CDAC)** *Jul 2020 – Dec 2020*
  Research Intern Pune, India
  ◦ Engineered a scalable platform for High Performance Computing (HPC) job submission to optimize data processing.
  ◦ Developed a portal for seamless management of big data tasks, enhancing research efficiency.

- **VoiceQube** *May 2019 – Jul 2019*
  Summer Intern Bangalore, India
  ◦ Participated in summer internship program as part of the practice school program at BITS Pilani.
  ◦ Developed a conversational service to assist students in their GRE preparation.

SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, C++, Java
- **Frameworks & Tools:** React, Spring, FastAPI, Flask
- **Machine Learning Libraries:** PyTorch, Transformers, NLTK, Pandas, Numpy, Langchain, Ollama
- **Cloud Technologies:** Google Cloud, AWS, Microsoft Azure
- **DevOps & Version Control:** Docker, Git, Kubernetes

LANGUAGE SKILLS

- **English:** Proficient

AWARDS AND GRANTS

- **Travel Subsidy Recipient** *Nov 2025*
  StarSEM 2025, Co-located with EMNLP 2025 Suzhou, China
- **Lloyd Botway Fellow** *April 2025*
  Computer Science Department, University of Colorado Boulder, USA
- **Outstanding Teaching Assistant** *March 2025*
  CSCI 1300, University of Colorado Boulder, USA
- **Winner - Poster Competition** *Feb 2025*
  Annual Research Expo, University of Colorado Boulder, USA
- **Grad App Aid Recipient** *Nov 2024*
  QueerInAI Boulder, USA

LEADERSHIP EXPERIENCE

- **Founder and President** *Sep 2019 – May 2021*
  VoiceQube Pilani
  ◦ Founded and led VoiceQube BITS Pilani Chapter to develop Voice interface-based projects.
  ◦ Deployed BITS Buddy to handle queries about campus life, responding to ~4000 requests between January and March 2020.