Akshita Bhagia

 $\rm https://akshitab.github.io$

Natural Language Processing, Machine Learning, Deep Learning

EXPERIENCE

• Allen Institute for Artificial Intelligence (AI2)

Seattle, WA

Senior Research Engineer

Jul 2021 - Present

Research Engineer 2

Jul 2020 - Jun 2021

Email: akshita23bhagia@gmail.com

Academic R&D in natural language processing (NLP). See list below for publications.

o Open Language Model (OLMo): Core contributions in dataset creation, model training, evaluation, and inference.

o Open-source libraries: OLMo, dolma ai2-olmo-eval, wimbd, ai2-catwalk, allennlp, ai2-tango, ai2-tailor

o Datasets: PALOMA, DOLMa, WMT22 African (release), No Language Left Behind NLLB (release)

• Cerebellum Capital

Machine Learning Intern

San Francisco, CA May 2019 - Aug 2019

o Adapted state-of-the-art deep learning models for financial time-series forecasting using Keras and Tensorflow.

• InFoCusp

Ahmedabad, India

Lead Platform Development Engineer Research Programmer Feb 2018 - Jun 2018 Jul 2015 - Jan 2018

• Engineered the core infrastructure of a data science platform used for R&D as well as production of financial models.

EDUCATION

University of Washington

Seattle, WA

Non-degree course enrollment (NLP for Cultural Analytics); GPA: 4.00/4.00

Jan~2023~-~March~2023

University of Massachusetts, Amherst

Master of Science in Computer Science; GPA: 4.00/4.00

Amherst, MA Sep 2018 – May 2020

Dhirubhai Ambani Institute of Information and Communication Technology

Bachelor of Technology in Information and Communication Technology; GPA: 8.95/10

Gandhinagar, India

Relevant courses

NLP for Cultural Analytics, Machine Learning, Neural Networks, Deep Learning for NLP, Systems for Data Science, Advanced Algorithms

PUBLICATIONS

Peer-reviewed Conference Papers

- Niklas Muennighoff, Luca Soldaini, Dirk Groeneveld, Kyle Lo, Jacob Daniel Morrison, Sewon Min, Weijia Shi, and others. OLMoE: Open Mixture-of-Experts Language Models. *Accepted to ICLR* (2025).
- Yanai Elazar, **Akshita Bhagia**, Ian Magnusson, Abhilasha Ravichander, Dustin Schwenk, Alane Suhr, Pete Walsh, and others. What's In My Big Data? *ICLR* (2024). **Spotlight** (5% papers).
- Dirk Groeneveld, Iz Beltagy, Pete Walsh, **Akshita Bhagia**, Rodney Kinney, Oyvind Tafjord, A. Jha, and others. OLMo: Accelerating the Science of Language Models. *ACL* (2024). **Best Theme Paper Award**.
- Ian Magnusson, **Akshita Bhagia**, Valentin Hofmann, Luca Soldaini, A. Jha, Oyvind Tafjord, Dustin Schwenk, and others. Paloma: A Benchmark for Evaluating Language Model Fit. *NeurIPS* (2024).

^{*} denotes equal contributors, † denotes core contributors

- Luca Soldaini[†], Rodney Kinney[†], **Akshita Bhagia**[†], Dustin Schwenk[†], David Atkinson, Russell Authur, Ben Bogin, and others. Dolma: an Open Corpus of Three Trillion Tokens for Language Model Pretraining Research. *ACL* (2024). **Best Resource Paper Award**.
- Hamish Ivison, **Akshita Bhagia**, Yizhong Wang, Hannaneh Hajishirzi, and Matthew Peters. HINT: Hypernetwork Instruction Tuning for Efficient Zero- and Few-Shot Generalisation. *ACL* (2023).
- Shruti Palaskar, **Akshita Bhagia**, Yonatan Bisk, Florian Metze, Alan W. Black, and Ana Marasović. On Advances in Text Generation from Images Beyond Captioning: A Case Study in Self-Rationalization. *Findings of EMNLP* (2022).
- Zhaofeng Wu, Robert L. Logan IV, Pete Walsh, **Akshita Bhagia**, Dirk Groeneveld, Sameer Singh, and Iz Beltagy. Continued Pretraining for Better Zero- and Few-Shot Promptability. *EMNLP* (2022).

Workshops and Preprints

- Akshita Bhagia*, Jiacheng Liu*, Alexander Wettig, David Heineman, Oyvind Tafjord, Ananya Harsh Jha, Luca Soldaini, and others. Establishing Task Scaling Laws via Compute-Efficient Model Ladders. arXiv preprint (2024).
- Team OLMo, Pete Walsh[†], Luca Soldaini[†], Dirk Groeneveld[†], Kyle Lo[†], Shane Arora[†], **Akshita Bhagia**[†], and others. 2 OLMo 2 Furious. arXiv preprint (2024).
- Dirk Groeneveld, Anas Awadalla, Iz Beltagy, **Akshita Bhagia**, Ian Magnusson, Hao Peng, Oyvind Tafjord, Pete Walsh, Kyle Richardson, and Jesse Dodge. Catwalk: A Unified Language Model Evaluation Framework for Many Datasets. *arXiv* preprint (2023).
- Kyle Richardson, Ian Magnusson, Oyvind Tafjord, **Akshita Bhagia**, Iz Beltagy, Arman Cohan, Pradeep Dasigi, and others. Robust Tooling and New Resources for Large Language Model Evaluation via Catwalk (extended abstract). *GEM Workshop*, *EMNLP* (2023).

ACADEMIC SERVICE AND OUTREACH

o Reviewer

- DHTech workshop at DH2024.
- WiNLP workshop at EMNLP (2024).
- o ACL Rolling Review (Jun 2024, Apr 2024, Feb 2024); conferences: ACL, EMNLP.
- LREC-COLING (2024); emergency reviewer.
- Co-organizer for the 2022 WMT Shared Task on Large Scale Machine Translation Evaluation for African Languages.
- Co-organizer for AllenNLP Hacks 2021 hackathon for minoritized communities.
- Master's chair for the graduate chapter of UMass Amherst CSWomen (Feb 2019 May 2020); handled monthly
 travel grants. The organization was awarded a Women for UMass grant towards travel expenses for graduate
 students.
- Student Representative of the Gender Cell at DA-IICT (2014-2015).

Talks and Panels

- o Tutorial on data preparation, model training, and adaptation at NeurIPS (December 2024).
- Panel on RSEs in domain-specific ecosystems at the US-RSE conference (October 2024).
- Open Source AI panel at the AI/ALL Summit: Future of Equitable and Inclusive AI (August 2024).
- Presenter on the Databricks webinar for the OLMo project (March 2024).

- Interviewed by Sam Charrington on the TWiML podcast about the OLMo project (March 2024).
- Workshop on the AllenNLP library at AllenNLP Hacks 2021.
- Workshop on Running experiments on Google Colaboratory at AllenNLP Hacks 2021.
- Panelist on the GHC Information Panel at UMass CICS in Spring 2020.

AWARDS

- o Geekwire Innovation of the Year 2024 Award for OLMo.
- Recipient of the AnitaB.org Grace Hopper Conference Scholarship 2019.

Mentoring

- o Pranjali Basmatkar, Research Engineering Intern @ AI2 (Summer 2023).
- o Sunitha Selvan, Research Engineering Intern @ AI2 (Summer 2022).
- o Arjun Subramonian, Research Engineering Intern @ AI2 AI2 Intern of the Year (Summer 2021).
- Subhodeep Maji, Research Programmer Intern @ InFoCusp (Spring 2017).