

Abhijeet Awasthi

Post-doctoral Researcher, Microsoft Research

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RESEARCH INTERESTS

Data-Efficient Training and Adaptation of Large Sequence Models for Text, Speech, and Code
Areas: [Weak Supervision](#), [Data-Generation](#), [Multilingual NLU](#), [Text-Editing](#), [Speech-to-Text](#)

EDUCATION

Indian Institute of Technology Bombay, India **July 2017 - June 2023**

Degree: Ph.D. in Computer Science and Engineering

Advisor: Prof. [Sunita Sarawagi](#)

Indian Institute of Technology Kharagpur, India **July 2012 - May 2016**

Degree: B.Tech. in Electronics and Electrical Communication

Advisor: Prof. [Goutam Saha](#)

EXPERIENCE

Microsoft Research, Bangalore **June 2023 - Present**

Post-doctoral Researcher in AI4Code Team

[Project:](#) Evaluating and Improving Code-LLMs beyond Functional Correctness

Google Research, Bangalore **April 2022 - November 2022**

Research Intern in Natural Language Understanding Team

[Project:](#) Using LLMs to bootstrap semantic parsers across 50 languages

Google Research, Zürich **October 2020 - January 2021**

Research Intern in Sense Audio Team (Cerebra)

[Project:](#) Few-shot recognition of multilingual hotwords

Samsung Research Institute, Noida **July 2016 - July 2017**

Software Engineer in GPS and Sensors Team

PUBLICATIONS

- [NoFunEval: Funny How Code LMs Falter on Requirements Beyond Functional Correctness](#)
Manav Singhal, Tushar Aggarwal, Abhijeet Awasthi, Nagarajan Natarajan, Aditya Kanade
Under Review
- [Conditional Tree Matching for Inference-Time Adaptation of Tree Prediction Models](#)
Harshit Varma, Abhijeet Awasthi, Sunita Sarawagi
International Conference on Machine Learning, **ICML 2023**
- [Bootstrapping Multilingual Semantic Parsers using Large Language Models](#)
Abhijeet Awasthi, N. Gupta, B. Samanta, S. Dave, S. Sarawagi, P. Talukdar
European Chapter of the Association for Computational Linguistics, **EACL 2023**
- [Structured Case-Based Reasoning for Inference-time Adaptation of Text-to-SQL parsers](#)
Abhijeet Awasthi, Soumen Chakrabarti, Sunita Sarawagi
AAAI Conference on Artificial Intelligence, **AAAI 2023**
- [Diverse Parallel Data Synthesis for Cross-Database Adaptation of Text-to-SQL parsers](#)
Abhijeet Awasthi, Ashutosh Sathe, Sunita Sarawagi
Empirical Methods in Natural Language Processing, **EMNLP 2022**
- [Learning from Rules Generalizing Labeled Exemplars \(Spotlight\)](#)
Abhijeet Awasthi, Sabyasachi Ghosh, Rasna Goyal, Sunita Sarawagi
International Conference on Learning Representations, **ICLR 2020**
- [Parallel Iterative Edit Models for Local Sequence Transduction \(Used by Grammarly\)](#)
Abhijeet Awasthi, Sunita Sarawagi, Rasna Goyal, Sabyasachi Ghosh, Vihari Piratla.
Empirical Methods in Natural Language Processing, **EMNLP 2019**

- [Teaching keyword spotters to spot new keywords with limited examples](#)
Abhijeet Awasthi, Kevin Kilgour, Hassan Rom
Annual Conference of ISCA, a.k.a. **INTERSPEECH 2021**
- [Error-driven Fixed-Budget ASR Personalization for Accented Speakers](#)
Abhijeet Awasthi, Aman Kansal, Sunita Sarawagi, Preethi Jyothi
International Conference on Acoustics, Speech, and Signal Processing, **ICASSP 2021**
- [Exploiting Language Relatedness for Low Web-Resource Language Model Adaptation](#)
Y. Khemchandani, S. Mehtani, V. Patil, Abhijeet Awasthi, P. Talukdar, S. Sarawagi
Annual Meeting of the Association for Computational Linguistics, **ACL 2021**
- [Black-box Adaptation of ASR for Accented Speech](#)
Kartik Khandelwal, Preethi Jyothi, Abhijeet Awasthi, and Sunita Sarawagi
Annual Conference of ISCA, a.k.a. **INTERSPEECH 2020**
- [Are BERT Named Entity Representations just as Good for any other Name?](#)
Sriram Balasubramanian, Naman Jain, Gaurav Jindal, Abhijeet Awasthi, Sunita Sarawagi
Fifth Workshop on Representation Learning for NLP, **RepL4NLP, ACL 2020**
- [Continual Learning with Neural Networks: A Review](#)
Abhijeet Awasthi, Sunita Sarawagi
Young Researchers' Symposium at ACM India **CODS-COMAD 2019**

HONORS

- AAI Student Scholarship (2023)
- Microsoft Research India Travel Grant for attending EMNLP-IJCNLP (2019)
- Google PhD Fellowship in Machine Learning (2018)
- Prime Minister Research Fellowship (2018)
- Merit-Cum-Means (MCM) scholarship for all the semesters at IIT Kharagpur (2012-2016)
- All-India Rank 691 out of 480,000 students in IIT Joint Entrance Examination. (2012)

COMPETITIONS

Grammatical Error Correction

Our team ML@IITB was ranked 7th in [Building Educational Applications 2019 Shared Task for Grammatical Error Correction](#). Our system had the highest recall among all the competing systems.

COURSEWORK

- **Machine Learning:** Foundations of Machine Learning, Advanced Machine Learning, Foundations of Intelligent and Learning Agents (Reinforcement Learning), Organization of Web Information (Information Extraction)
- **Mathematics:** Convex Optimization, Matrix Algebra, Probability and Stochastic Processes
- **Computer Science:** Design and Analysis of Algorithms, Discrete Structures, Data Structures and Object Representation, Database Management Systems, Advanced Operating System Design
- **Signal Processing:** Signals and Systems, Digital Signal Processing, Digital Signal Processing Applications, Digital Image Processing

PROGRAMMING SKILLS

- **Languages:** Python, C, C++
- **Libraries:** TensorFlow, PyTorch, DeepSpeed, HuggingFace, T5X, AllenNLP, NLTK, NumPy
- **Tools:** L^AT_EX, Google Cloud Platform, Microsoft Azure, Android Studio

SERVICE

- **Teaching Assistantships:** Maths for Visual Computing (2018), Design and Analysis of Algorithms (2019), Foundations of Machine Learning (2019), Advanced Machine Learning (2020)
- **Conference Reviewing:** ICML-20, ICLR-21, AAI-21, NeurIPS-22, EMNLP-22, ACL-22, IJCAI-23, NeurIPS-23
- **Student Volunteering:** ICLR-20, ICML-20, EMNLP-22, AAI-23
- [National Service Scheme](#) volunteer at Golghoria village in Kharagpur, West Bengal (2012-2014)