E-mail: akari@cs.washington.edu
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September 2019 - Present

Akari Asai

EDUCATION

	Advisor: Prof. Hannaneh Hajishirzi			
	The University of Tokyo, Tokyo, Japan B.E. in Information and Communication Engineering Thesis Advisor: Kiyoharu Aizawa Major GPA: 3.90/4, Cumulative GPA: 3.83/4; 1st rank in class (1/133), Dean's Award			
	University of California, Berkeley, Berkeley, California American and International Study Program (AISP) at Department	August 2015 - May 2016 t of Political Science		
EMPLOYMENT	University of Washington Ph.D. Student (Supervisor: Hannaneh Hajishirzi)	Sep 2019-Present, Seattle, WA		
	Meta AI Research Intern (Supervisors: Sebastian Riedel, Scott Yih) Visiting Student Researcher (Present; Supervisor: Scott Yih)	Jul 2022-Jan 2023, Seattle, WA Sep 2023-Present, Seattle, WA		
	Allen Institute for AI Research Intern (Supervisors: Hannaneh Hajishirzi, Matt Gardner)	Jul 2021-Dec 2021, Seattle, WA		
	Salesforce Research Research Intern (Supervisors: Kazuma Hashimoto, Caiming Xiong)	Apr 2019-Aug 2019, Palo Alto, CA		
	Microsoft Research Asia Research Intern (Supervisors: Duyu Tang, Nan Duan)	Sep 2018-Jan 2019, Beijing, China		
	Aizawa Yamasaki Lab, The University of Tokyo Thesis Student (Supervisor: Kiyoharu Aizawa)	Apr 2018-Mar 2019, Tokyo, Japan		
	Studio Ousia Research Intern (Supervisor: Ikuya Yamada)	Mar 2018-Mar 2019, Tokyo, Japan		
	Tsuruoka Lab, The University of Tokyo Research Assistant (Supervisor: Yoshimasa Tsuruoka)	Dec 2017-Mar 2019, Tokyo, Japan		
	Google, Google Chrome Blink team Engineering Intern	Aug-Oct 2017, Tokyo, Japan		
	Megagon Labs Research Intern (Supervisor: Alon Y. Halevy)	Mar-Apr, 2017, Tokyo, Japan		
	Google , iGSA (Google Search iOS) team Engineering Intern	Jun-Oct 2016, Tokyo, Japan		
SELECTED AWARDS & GRANT	Best Paper Honorable Mention at NeurIPS 2023 Instruction Wor ACL 2023 Best Video Award Microsoft Accelerate Foundation Models Research Stability AI HPC Cluster Research Grant EECS Rising Stars IBM PhD Fellowship The Dean's Award, The Best Bachelor Thesis Award, The Univers The Nakajima Foundation Scholarship (Doctoral Study Abroad H Women Techmakers Scholarship (Google Anita Borg Memorial S	2023 2023 2023 2022 2022 2022 2019 Program Fellowship) 2018		
Publications	[1] BUFFET: Benchmarking Large Language Models for Few-shot Akari Asai , Sneha Kudugunta, Xinyan Velocity Yu, Terra Ble Tsvetkov, Sebastian Ruder, Hannaneh Hajishirzi	•		

University of Washington, Seattle, Washington

Ph.D. Student, Computer Science and Engineering

Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2024.

[2] Self-RAG: Learning to Retrieve, Generate, and Critique through Self-Reflection.

Akari Asai, Zeqiu Wu, Yizhong Wang, Avirup Sil, Hannaneh Hajishirzi International Conference on Learning Representations (ICLR; oral – top1%), 2024

Best Paper Honorable Mention at Instruction Workshop at NeurIPS, 2023.

[3] RealTime QA: What's the Answer Right Now?. Jungo Kasai, Keisuke Sakaguchi, Yoichi Takahashi, Ronan Le Bras, Akari Asai, Xinyan Yu, Dragomir Radev, Noah A. Smith, Yejin Choi, Kentaro Inui NeurIPS (Datasets and Benchmarks), 2023.

[4] TaskWeb: Selecting Better Source Tasks for Multi-task NLP. Joongwon Kim, Akari Asai, Gabriel Ilharco, Hannaneh Hajishirzi. Conference on Empirical Methods in Natural Language Processing (EMNLP), 2023.

[5] How to Train Your DRAGON: Diverse Augmentation Towards Generalizable Dense Retrieval. Sheng-Chieh Lin, Akari Asai, Minghan Li, Barlas Oguz, Jimmy Lin, Yashar Mehdad, Wen-tau Yih, Xilun Chen. Findings of EMNLP, 2022.

[6] AfriQA: Cross-lingual Open-Retrieval Question Answering for African Languages. Odunayo Ogundepo, Tajuddeen R. Gwadabe, Clara E. Rivera, Jonathan H. Clark, Sebastian Ruder, David Ifeoluwa Adelani, Bonaventure F. P. Dossou, ..., Akari Asai (52 authors). Findings of EMNLP, 2022.

[7] When Not to Trust Language Models: Investigating Effectiveness and Limitations of Parametric and Non-Parametric Memories.

Alex Mallen*, Akari Asai*, Victor Zhong, Rajarshi Das, Hannaneh Hajishirzi, Daniel Khashabi The Annual Conference of the Association for Computational Linguistics (ACL; oral), 2023. ACL 2023 Best Video Award.

[8] Task-aware Retrieval with Instructions.

Akari Asai, Timo Schick, Patrick Lewis, Xilun Chen, Gautier Izacard, Sebastian Riedel, Hannaneh Hajishirzi, Wen-tau Yih Findings of ACL, 2023.

[9] xPQA: Cross-Lingual Product Question Answering across 12 Languages. Xiaoyu Shen, **Akari Asai**, Bill Byrne, Adrià de Gispert The Annual Conference of the Association for Computational Linguistics (ACL; Industry track), 2023.

[10] Attentional Mixtures of Soft Prompt Tuning for Parameter-efficient Multi-task Knowledge Sharing. Akari Asai, Mohammadreza Salehi, Matthew E. Peters, and Hannaneh Hajishirzi. Conference on Empirical Methods in Natural Language Processing (EMNLP), 2022.

[11] Beyond Counting Datasets: Investigating Multilingual Dataset Construction and Necessary Resources. Xinyan Yu*, Akari Asai*, Trina Chatterjee, Junjie Hu, Eunsol Choi. Findings of EMNLP, 2022.

[12] MIA 2022 Shared Task: Evaluating Cross-lingual Open-Retrieval Question Answering for 16 Diverse Languages.

Akari Asai, Shayne Longpre, Jungo Kasai, Chia-Hsuan Lee, Rui Zhang, Junjie Hu, Ikuya Yamada, Jonathan H. Clark, Eunsol Choi Workshop on Multilingual Information Access (MIA), 2022.

[13] Evidentiality-guided Generation for Knowledge-Intensive NLP Tasks. Akari Asai, Matt Gardner, and Hannaneh Hajishirzi Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL; oral), 2022.

[14] One Question Answering Model for Many Languages with Cross-lingual Dense Passage Retrieval. Akari Asai, Xinyan Yu, Jungo Kasai, and Hannaneh Hajishirzi. Conference on Neural Information Processing Systems (NeurIPS), 2021.

[15] Challenges in Information Seeking QA: Unanswerable Questions and Paragraph Retrieval. Akari Asai and Eunsol Choi.

The Annual Conference of the Association for Computational Linguistics (ACL), 2021.

- [16] Efficient Passage Retrieval with Hashing for Open-domain Question Answering. Ikuya Yamada, **Akari Asai** and Hannaneh Hajishirzi.
 - The Annual Conference of the Association for Computational Linguistics (ACL), 2021.
- [17] XOR QA: Cross-lingual Open-Retrieval Question Answering.
 - **Akari Asai**, Jungo Kasai, Jonathan H. Clark, Kenton Lee, Eunsol Choi, and Hannaneh Hajishirzi. Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL; oral), 2021.
- [18] MultiModalQA: complex question answering over text, tables and images.

 Alon Talmor, Ori Yoran, Amnon Catav, Dan Lahav, Yizhong Wang, **Akari Asai**, Gabriel Ilharco, Hannaneh Hajishirzi, Jonathan Berant.

 International Conference on Learning Representations (ICLR), 2021.
- [19] LUKE: Deep Contextualized Entity Representations with Entity-aware Self-attention. Ikuya Yamada, **Akari Asai**, Hiroyuki Shindo, Hideaki Takeda, and Yuji Matsumoto. *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2020.
- [20] Wikipedia2Vec: An Optimized Tool for Learning Embeddings of Words and Entities from Wikipedia. Ikuya Yamda, **Akari Asai**, Jin Sakuma, Hiroyuki Shindo, Hideaki Takeda, Yoshiyasu Takefuji, and Yuji Matsumoto.
 - Conference on Empirical Methods in Natural Language Processing (EMNLP, demo), 2020.
- [21] Logic-guided Data Augmentation and Regularization for Consistent Question Answering. **Akari Asai** and Hannaneh Hajishirzi. *The Annual Conference of the Association for Computational Linguistics (ACL)*, 2020.
- [22] Learning to Retrieve Reasoning Paths over Wikipedia Graphs for Question Answering **Akari Asai**, Kazuma Hashimoto, Hannaneh Hajishirzi, Richard Socher, and Caiming Xiong. *International Conference on Learning Representations (ICLR)*, 2020.

PUBLICATIONS BEFORE Ph.D.

- [23] The Aleatoric Uncertainty Estimation Using a Separate Formulation with Virtual Residuals. Takumi Kawashima, Qing Yu, **Akari Asai**, Daiki Ikami, Kiyoharu Aizawa. *International Conference on Pattern Recognition (ICPR)*, 2020.
- [24] Multi-task Learning Based on Separable Formulation of Depth Estimation and Uncertainty.
 Akari Asai, Daiki Ikami, and Kiyoharu Aizawa.
 Conference on Computer Vision and Pattern Recognition (CVPR), Uncertainty and Robustness in Deep Visual Learning, 2019.
- [25] HappyDB: A Corpus of 100,000 Crowdsourced Happy Moments Akari Asai, Sara Evensen, Behzad Golshan, Alon Halevy, Vivian Li, Andrei Lopatenko, Daniela Stepanov, Yoshihiko Suhara, Wang-Chiew Tan, and Yinzhan Xu. International Conference on Language Resources and Evaluation (LREC), 2018.
- [26] A Data-Driven Approach to Understanding Happiness **Akari Asai**, Vivian Li, Daniela Stepanov, and Wang-Chiew Tan. ACL Widening NLP Workshop, 2017.

PREPRINTS

- [27] Fine-grained Hallucination Detection and Editing for Language Models. Abhika Mishra, Akari Asai, Vidhisha Balachandran, Yizhong Wang, Graham Neubig, Yulia Tsvetkov, Hannaneh Hajishirzi Arxiv Preprint, 2024.
- [28] Inferential Text Generation with Multiple Knowledge Sources and Meta-Learning. Daya Guo*, Akari Asai*, Duyu Tang, Nan Duan, Ming Gong, Linjun Shou, Daxin Jiang, Jian Yin, and Ming Zhou. Arxiv Preprint, 2020.
- [29] Multilingual Extractive Reading Comprehension by Runtime Machine Translation. Akari Asai, Akiko Eriguchi, Kazuma Hashimoto, and Yoshimasa Tsuruoka. Arxiv Preprint, 2018

TEACHING AND	Invited Lecturer, CPSC 477/577 Natural Language Processing, Yale University	Mar 2024
LEADERSHIP	Invited Lecturer, CSE 447 Natural Language Processing, University of Washington	Mar 2024
EXPERIENCE	Head TA, CSE599J Data-centric ML, University of Washington	Winter 2024
	Head TA & Guest Lecturer, CSE473 Artificial Intelligence, University of Washington	Fall 2023

July 2023 Instructor, Tutorial on Retrieval-based LMs and Applications, ACL Invited Lecturer, CSE 447 Natural Language Processing, University of Washington Mar 2023 Invited Lecturer, CSE 373 Data Structures and Algorithm, University of Washington Dec 2022 Co-organizer & TA, Todai Girls Hackathon 2017, UTokyo June - Oct 2017 Invited Speaker, Mind The Gap, Google Aug 2016 / Sept 2017, Tokyo

Department: SERVICES

Ph.D. Admission Committee Member (2021, 2022) Ph.D. Admission NLP Area Chair (2021, 2022)

Diversity and Inclusion Committee Representative (2022-Present)

UW NLP Seminar Organizer (2023-2024)

Conference Organization:

Lead Organizer of Workshop on Multilingual Information Access (MIA), NAACL 2022

Shared-task Lead Organizer MIA 2022 Shared task, NAACL 2022.

Student Volunteer Coordinator, NAACL 2022. **Area Chair:** EACL 2023 (Question Answering)

EMNLP 2023 (Question Answering)

Reviewer/Program Committee: ACL 2020-2023

EMNLP 2019-2023 ARR 2021-Present. NeurIPS 2021-2023 ICLR 2021-2024 **AKBC 2020 AAAI 2020 IJCAI 2021**

MENTORING

Velocity Yu, UW CSE BS student \rightarrow USC Ph.D. [11][14][1] Apr 2021-June 2022 Apr 2022-July 2023 Alex Mallen, a UW CSE BS student → EleutherAI [7] Abhika Mishra, a UW CSE BS student [27] January 2023-Present Daniel Kim, a UW CSE Ph.D. student [4] Sept 2022-July 2023 Go Kamoda, a Tohoku University CS Master student March 2023-Present Weekly Virtual Office hour, offering weekly 1 hour office hours open to public. Mar 2022-Present UW CSE Ph.D. Pre-Application Mentorship Service (PAMS) 2022

SELECTED INVITED TALKS

University of Edinburgh, Microsoft Medical, UMass Amherst: Self-reflective Language Models Virtual, Oct/Nov 2023

Preferred Networks, University of Tokyo, MLDS Unit seminar @Okinawa Institute of Science and **Technology:** Retrieval-augmented LMs and Applications Japan, Aug 2023 REML@SIGIR, The University of Queensland: Investigating and Building Efficient and Reliable LMs with Retrieval Virtual, July 2023

MILA NLP Reading Group: Adaptive and trustworthy NLP with Retrieval Montreal, April 2023 The AI TALK: Adaptive and trustworthy NLP with Retrieval Virtual, March 2023 AI Quiz King: Towards Better Multilingual Information Access Virtual, December, 2022 Amazon (Alexa): Towards Better Multilingual Information Access Virtual, August, 2022

SEA: Search Engines Amsterdam: One Question Answering Model for Many Languages with Crosslingual Passage Retrieval Virtual, October 2021

Apple (Web Answers): One Question Answering Model for Many Languages with Cross-lingual Passage Retrieval Virtual, July 2021

Google Language & Apple (Web Answers): XOR QA: Cross-lingual Open-Retrieval Question Answering Virtual, January, 2021

Google Research: Learning to Retrieve Reasoning Paths over Wikipedia Graphs June, 2020

PRESS & MEDIA Lost in translation no more: IBM Fellowship winner Akari Asai asks — and answers — big questions in NLP to expand information access to all (Allen School News) 2022 Going Beyond SQuAD: Question Answering in Different Languages (Towards Data Science) 2020 Salesforce's AI navigates Wikipedia to find answers to complex questions (Venture Beat) 2020

Learning to retrieve reasoning paths from the Wikipedia graph (Salesforce Research Blog)	2020		
Top Trends of Graph Machine Learning in 2020 (Towards Data Science)	2020		
100,000 happy moments - What makes people happy? A huge database is making it possible to discern			
the answer at last. (MIT Technology Review)	2019		