

Akari Asai Curriculum Vitae

University of Washington
185 E Stevens Way NE
Seattle, WA 98195-2350

akariasai.github.io/
akari@cs.washington.edu
+1 (650)-334-9945

Education

- 09/2019 – **University of Washington**
present Ph.D. in Computer Science
Paul G. Allen School of Computer Science and Engineering
Supervisor: Hannaneh Hajishirzi
- 03/2019 **University of Tokyo**
B.E. in Information and Communication Engineering (Electrical and Computer Engineering)
Department of Engineering
Supervisor: Kiyoharu Aizawa
Major GPA: 3.90/4, Cumulative GPA: 3.83
1st in Class (1/133), Dean's Award, Best Undergraduate Thesis Award
- 08/2015 – **University of California, Berkeley**
05/2016 American and International Study Program (AISP), Department of Political Science

Employment

- 09/2019 – **University of Washington**
present Ph.D. Student with Hannaneh Hajishirzi
- 09/2023 – **FAIR, Meta**
present Visiting Student Researcher with Scott Yih
- 07/2022 – **FAIR, Meta**
02/2023 Research Intern with Scott Yih, Sebastian Riedel
- 06/2021 – **Allen Institute for AI**
12/2021 Research Intern with Hannaneh Hajishirzi, Matt Gardner
- 04/2019 – **Salesforce Research**
08/2020 Research Intern with Kazuma Hashimoto, Caiming Xiong, Richard Socher
- 09/2018 – **Microsoft Research Asia**
01/2019 Research Intern with Nan Duan, Duyu Tang
- 03/2017 – **Megagon Lab**
05/2017 Research Intern with Alon Y. Halevy
- 06/2016 – **Google Japan**
10/2016 Engineering Intern at Google Search

Selected Awards, Grant and Fellowship

- 2024 NeurIPS 2024 Outstanding Reviewer
- 2024 MIT Technology Review Innovators Under 35 Japan
- 2024 Amazon Research Grant
- 2024 Microsoft Accelerate Foundation Models Research
- 2023 Best Paper Honorable Mention at NeurIPS 2023 Instruction-tuning Workshop
- 2023 Outstanding Paper Award at Annual Meeting of Japanese Association for NLP
- 2023 Best Video Award (Most Viewed) ACL 2023
- 2023 Stability AI HPC Cluster Research Grant
- 2023 Microsoft Accelerate Foundation Models Research
- 2022 EECS Rising Stars
- 2022 The IBM Ph.D. Fellowship
- 2019 The Dean's Award, Best Undergraduate Thesis Award at University of Tokyo
- 2019 The Young Researcher Award at Annual Meeting of Japanese Association for NLP
- 2019 The Nakajima Foundation Doctoral Studying Abroad Scholarship (2019-2022)
- 2017 Women Techmakers Scholarship (Google Anita Borg Memorial Scholarship)

Peer-Reviewed Conference Publications

Google Scholar: https://scholar.google.com/citations?user=gqB4u_wAAAAJ&hl=en
Semantic Scholar: <https://www.semanticscholar.org/author/Akari-Asai/35584853>

- [C26] Rulin Shao, Jacqueline He, **Akari Asai**, Weijia Shi, Tim Dettmers, Sewon Min, Luke Zettlemoyer, Pang Wei Koh. Scaling Retrieval-Based Language Models with a Trillion-Token Datas-tore. In *Proceedings of Conference on Neural Information Processing Systems (NeurIPS)*. 2024. [pdf]
- [C25] Tong Chen, **Akari Asai***, Niloofar Miresghallah*, Sewon Min, James Grimmermann, Yejin Choi, Hannaneh Hajishirzi, Luke Zettlemoyer, Pang Wei Koh. CopyBench: Measuring Literal and Non-Literal Reproduction of Copyright-Protected Text in Language Model Generation. In *Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2024. [pdf]
- [C24] Abhika Mishra, **Akari Asai**, Vidhisha Balachandran, Yizhong Wang, Graham Neubig, Yulia Tsvetkov, and Hannaneh Hajishirzi. Fine-grained Hallucination Detection and Editing for Language Models. In *Proceedings of Conference on Language Modeling (COLM)*. 2024. [pdf]

- [C23] **Akari Asai**, Sneha Kudugunta, Xinyan Velocity Yu, Terra Blevins, Hila Gonen, Machel Reid, Yulia Tsvetkov, Sebastian Ruder, Hannaneh Hajishirzi. BUFFET: Benchmarking Large Language Models for Few-shot Cross-lingual Transfer. In *Proceedings of Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*. 2024. [pdf]
[Oral Presentation](#)
- [C22] **Akari Asai**, Zeqiu Wu, Yizhong Wang, Avirup Sil, Hannaneh Hajishirzi. Self-RAG: Learning to Retrieve, Generate, and Critique through Self-Reflection. In *Proceedings of International Conference on Learning Representations*. 2024. [pdf]
[Oral Presentation \(Top 1% among 7k submissions\)](#)
[Most Influential ICLR 2024 Papers No. 13 \(Paper Digest\)](#)
[Best Paper Honorable Mention at NeurIPS Instruction Workshop](#)
[Officially integrated into LangChain and LlamaIndex](#)
[Features in Forbes](#)
[1.8k Github Stars](#)
- [C21] Jungo Kasai, Keisuke Sakaguchi, Yoichi Takahashi, Ronan Le Bras, **Akari Asai**, Xinyan Yu, Dragomir Radev, Noah A. Smith, Yejin Choi, Kentaro Inui. RealTime QA: What's the Answer Right Now?. In *Proceedings of NeurIPS (Datasets and Benchmarks)*. 2023. [pdf]
- [C20] Joongwon Kim, **Akari Asai**, Gabriel Ilharco, Hannaneh Hajishirzi. TaskWeb: Selecting Better Source Tasks for Multi-task NLP. In *Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2023. [pdf]
- [C19] Sheng-Chieh Lin, **Akari Asai**, Minghan Li, Barlas Oguz, Jimmy Lin, Yashar Mehdad, Wen-tau Yih, Xilun Chen. How to Train Your DRAGON: Diverse Augmentation Towards Generalizable Dense Retrieval. In *Proceedings of Findings of EMNLP*. 2023. [pdf]
- [C18] Odunayo Ogundepo, Tajuddeen R. Gwadabe, Clara E. Rivera, Jonathan H. Clark, Sebastian Ruder, David Ifeoluwa Adelani, Bonaventure F. P. Dossou, ..., **Akari Asai** ... (52 authors). AfriQA: Cross-lingual Open-Retrieval Question Answering for African Languages. In *Proceedings of Findings of EMNLP*. 2023. [pdf]
- [C17] Alex Mallen*, **Akari Asai***, Victor Zhong, Rajarshi Das, Hannaneh Hajishirzi, Daniel Khashabi. When Not to Trust Language Models: Investigating Effectiveness and Limitations of Parametric and Non-Parametric Memories. [pdf] In *Proceedings of the Annual Conference of the Association for Computational Linguistics (ACL)*.
[Oral Presentation](#)
[ACL 2023 Best Video Award \(Most Viewed\)](#)
[Most Influential ACL 2023 Paper No 14 \(Paper Digest\)](#)
- [C16] **Akari Asai**, Timo Schick, Patrick Lewis, Xilun Chen, Gautier Izacard, Sebastian Riedel, Hannaneh Hajishirzi, Wen-tau Yih. Task-aware Retrieval with Instructions. In *Proceedings of Findings of ACL*. 2022. [pdf]
- [C15] Xiaoyu Shen, **Akari Asai**, Bill Byrne, Adrià de Gispert. xPQA: Cross-Lingual Product Question Answering across 12 Languages. In *Proceedings of the Annual Conference of the Association for Computational Linguistics (ACL; Industry track)*. 2022. [pdf]

- [C14] **Akari Asai**, Mohammadreza Salehi, Matthew E. Peters, and Hannaneh Hajishirzi. Attentional Mixtures of Soft Prompt Tuning for Parameter-efficient Multi-task Knowledge Sharing. In *Proceedings of 2Conference on Empirical Methods in Natural Language Processing*. 2022. [pdf]
- [C13] Xinyan Yu*, **Akari Asai***, Trina Chatterjee, Junjie Hu, Eunsol Choi. Beyond Counting Datasets: Investigating Multilingual Dataset Construction and Necessary Resources. *Findings of EMNLP*. 2022. [pdf]
- [C12] **Akari Asai**, Matt Gardner, and Hannaneh Hajishirzi. Evidentiality-guided Generation for Knowledge-Intensive NLP Tasks. In *Proceedings of Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*. 2022. [pdf]
[Oral Presentation](#)
- [C11] **Akari Asai**, Xinyan Yu, Jungo Kasai, and Hannaneh Hajishirzi. One Question Answering Model for Many Languages with Cross-lingual Dense Passage Retrieval. In *Proceedings of Conference on Neural Information Processing Systems (NeurIPS)*. 2021. [pdf]
- [C10] Takumi Kawashima, Qina Yu, **Akari Asai**, Daiki Ikami, Kiyoharu Aizawa. The aleatoric uncertainty estimation using a separate formulation with virtual residuals. In *Proceedings of International Conference on Pattern Recognition (ICPR)*. 2021. [pdf]
- [C9] **Akari Asai** and Eunsol Choi. Challenges in Information Seeking QA: Unanswerable Questions and Paragraph Retrieval. In *Proceedings of the Annual Conference of the Association for Computational Linguistics (ACL)*. 2021. [pdf]
- [C8] Ikuya Yamada, **Akari Asai** and Hannaneh Hajishirzi. Efficient Passage Retrieval with Hashing for Open-domain Question Answering In *Proceedings of the Annual Conference of the Association for Computational Linguistics (ACL)*. 2021. [pdf]
- [C7] **Akari Asai**, Jungo Kasai, Jonathan H. Clark, Kenton Lee, Eunsol Choi, and Hannaneh Hajishirzi. XOR QA: Cross-lingual Open-Retrieval Question Answering. In *Proceedings of Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*. 2021. [pdf]
[Oral Presentation](#)
- [C6] Alon Talmor, Ori Yoran, Amnon Catav, Dan Lahav, Yizhong Wang, **Akari Asai**, Gabriel Ilharco, Hannaneh Hajishirzi, Jonathan Berant. MultiModalQA: complex question answering over text, tables and images. In *Proceedings of International Conference on Learning Representations (ICLR)*. 2021. [pdf]
- [C5] Ikuya Yamada, **Akari Asai**, Hiroyuki Shindo, Hideaki Takeda, and Yuji Matsumoto. LUKE: Deep Contextualized Entity Representations with Entity-aware Self-attention. In *Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2020. [pdf]
[Most Influential EMNLP 2020 Paper No.8 \(Paper Digest\)](#)
[1.3 million downloads at Hugging face](#)
[Officially integrated into Huggingface Transformers Model Class](#)
[700+ Github Stars](#)

- [C4] Ikuya Yamada, **Akari Asai**, Jin Sakuma, Hiroyuki Shindo, Hideaki Takeda, Yoshiyasu Takefuji, and Yuji Matsumoto. Wikipedia2Vec: An Optimized Tool for Learning Embeddings of Words and Entities from Wikipedia. *In Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP, demo)*. 2020. [pdf]
[400k PyPI Install](#)
[1k+ Github starts](#)
- [C3] **Akari Asai** and Hannaneh Hajishirzi. Logic-guided Data Augmentation and Regularization for Consistent Question Answering. *In Proceedings of The Annual Conference of the Association for Computational Linguistics (ACL; Short)*. 2020. [pdf]
- [C2] **Akari Asai**, Kazuma Hashimoto, Hannaneh Hajishirzi, Richard Socher, and Caiming Xiong. Learning to Retrieve Reasoning Paths over Wikipedia Graphs for Question Answering. *International Conference on Learning Representations (ICLR)*, 2020. [pdf]
[Featured in VentureBeat](#)
[Featured in Towards DataScience \(Top Trends of Graph Machine Learning in 2020\)](#)
[Integrated into Salesforce COVID Search \(CO-Search\)](#)
- [C1] **Akari Asai**, Sara Eversen, Behzad Golshan, Alon Halevy, Vivian Li, Andrei Lopatenko, Daniela Stepanov, Yoshihiko Suhara, Wang-Chiew Tan, and Yinzhan Xu. HappyDB: A Corpus of 100,000 Crowdsourced Happy Moments *In Proceedings of International Conference on Language Resources and Evaluation (LREC)*, 2018. [pdf]
[Featured in MIT Technology Review](#)

Preprint

- [P5] Xiang Yue*, Yueqi Song*, **Akari Asai**, Seungone Kim, Jean de Dieu Nyandwi, Simran Khanuja, Anjali Kantharuban, Lintang Sutawika, Sathyanarayanan Ramamoorthy, Graham Neubig. Pangea: A Fully Open Multilingual Multimodal LLM for 39 Languages. *Under review*. 2024. [pdf]
- [P4] Zora Zhiruo Wang*, **Akari Asai***, Xinyan Velocity Yu, Frank F. Xu, Yiqing Xie, Graham Neubig, Daniel Fried. CodeRAG-Bench: Can Retrieval Augment Code Generation?. *Under review*. 2024. [pdf]
- [P3] Go Kamoda, **Akari Asai**, Ana Brassard, Keisuke Sakaguchi. Quantifying the Influence of Evaluation Aspects on Long-Form Response Assessment. *Under review*. 2024.
[Outstanding Paper at Annual Meeting of the Japanese Association for NLP](#)
- [P2] **Akari Asai**, Zexuan Zhong, Danqi Chen, Pang Wei Koh, Luke Zettlemoyer, Hannaneh Hajishirzi, Wen-tau Yih. Reliable, Adaptable, and Attributable Language Models with Retrieval. 2024. [pdf]
- [P1] **Akari Asai**, Akiko Eriguchi, Kazuma Hashimoto, Yoshimasa Tsuruoka. Multilingual extractive reading comprehension by runtime machine translation. 2018. [pdf]

Tutorials

- [T1] **Akari Asai**, Sewon Min, Zexuan Zhong, Danqi Chen. Retrieval-based Language Models and Applications. In *Proceedings of the Annual Conference of the Association for Computational Linguistics (ACL; Tutorial)*. 2023.

Workshop Publications

- [W3] **Akari Asai**, Shayne Longpre, Jungo Kasai, Chia-Hsuan Lee, Rui Zhang, Junjie Hu, Ikuya Yamada, Jonathan H. Clark, Eunsol Choi. MIA 2022 Shared Task: Evaluating Cross-lingual Open-Retrieval Question Answering for 16 Diverse Languages. In *Proceedings of Workshop on Multilingual Information Access (MIA)*. 2022. [pdf]
- [W2] **Akari Asai**, Daiki Ikami, and Kiyoharu Aizawa. Multi-task Learning Based on Separable Formulation of Depth Estimation and Uncertainty. In *Proceedings of Conference on Computer Vision and Pattern Recognition (CVPR), Uncertainty and Robustness in Deep Visual Learning*. 2019.
- [W1] **Akari Asai**, Vivian Li, Daniela Stepanov, and Wang-Chiew Tan. A Data-Driven Approach to Understanding Happiness. In *Proceedings of ACL Widening NLP Workshop (WiNLP)*. 2018.

Teaching

Head TA at Courses

- Winter 2024 **CSE599J Data-centric ML (Graduate)**
Paul G. Allen School of Computer Science and Engineering, University of Washington
Instructor: Pang Wei Koh
- Fall 2023 **CSE473 Artificial Intelligence (Undergraduate)**
Paul G. Allen School of Computer Science and Engineering, University of Washington
Instructor: Hannaneh Hajishirzi

Conference Tutorial Instructor

- July 2023 **Tutorial on Retrieval-based LMs and Applications**
The 61st Annual Meeting of the Association for Computational Linguistics (ACL)
Co-instructors: Sewon Min, Zexuan Zhong, Danqi Chen

Invited Lecturer at Courses

- Fall 2024 **CS 769 Advanced Natural Language Processing**
Department of Computer Science, University of Wisconsin-Madison
Instructor: Junjie He
- Fall 2024 **CS 11-667 Large Language Models: Methods and Applications**
School of Computer Science, Carnegie Mellon University
Instructor: Daphne Ippolito and Chenyan Xiong

- Spring 2024* **CPSC 477/577 Natural Language Processing**
 Department of Computer Science, Yale University
 Instructor: Arman Cohan
- Spring 2024* **CS 11-711 Advanced NLP**
 School of Computer Science, Carnegie Mellon University
 Instructor: Graham Neubig
- Spring 2024* **CSE 561A: Large Language Models**
 Department of Computer Science, Washington University in St. Louis
 Instructor: Jiaxin Huang
- Winter 2024* **CSE 447 Natural Language Processing**
 Paul G. Allen School of Computer Science and Engineering, University of Washington
 Instructor: Yejin Choi
- Fall 2023* **CSE 473 Introduction to Artificial Intelligence**
 Paul G. Allen School of Computer Science and Engineering, University of Washington
 Instructor: Hannaneh Hajishirzi
- Winter 2023* **CSE 447 Natural Language Processing**
 Paul G. Allen School of Computer Science and Engineering, University of Washington
 Instructor: Sofia Serrano
- Fall 2022* **CSE 373 Data Structures and Algorithm**
 Paul G. Allen School of Computer Science and Engineering, University of Washington
 Instructor: Kevin Lin

Mentoring

- 04/2022* – **Public Office hour**
09/2024 Virtual office hours open to public (Two 30 minutes 1-on-1 sessions every week)
 More than 90 students joined to discuss research and Ph.D. applications

PhD Students

- 03/2024* – **Tong Chen**
present UW CSE Ph.D. student (advised by Hannaneh Hajishirzi and Luke Zettlemoyer)
EMNLP 24
- 09/2023* – **Daniel Kim**
07/2024 PhD student (advised by Hannaneh Hajishirzi)
EMNLP 23

Predoctoral Students

- 01/2023* – **Abhika Mishra**
present UW CSE Undergraduate Student
COLM 24

- 01/2023 – **Go Kamoda**
present Tohoku University Master Student
Outstanding Paper Award at Japanese Association for NLP
- 04/2022 – **Alex Mallen**
 06/2023 UW CSE Undergraduate Student → Research Engineer at Eleuther AI
ACL 23 (Best Video Award and Oral Presentation)
Outstanding Senior Student Award
- 04/2021 – **Velocity Yu**
 06/2022 UW CSE Undergraduate Student → Ph.D. Student at University Southern California
NeurIPS 21; Findings of EMNLP 23; NAACL 2024

Service

Academic Services within the University

- 2021-2023 **Ph.D. Admission Student Area Chair (NLP)**
 Managed Ph.D. Admission's Student Reviewing Process for the entire UW NLP group
- 2021-2023 **Ph.D. Admission Committee Member**
 Reviewed Ph.D. application materials for applicants in NLP
- 2022 – 2023 **Diversity and Inclusion Committee Student Representative**
 Represented student perspectives at monthly departmental DEI meetings
- 2022 – 2023 **Faculty Hiring Student DEI Reviewer**
 Played a role in integrating DEI considerations into the UW CSE faculty hiring process
- 2022 **Ph.D. Pre-Application Mentorship Service (PAMS) Mentor**
 Mentored students from underrepresented groups in preparing their Ph.D. applications
- 2023 – *present* **UW NLP Seminar Organizer**
 Organized and invited speakers for the annual UWNLP seminar series
 2023: Chenhao Tan, Tri Dao, He He, Tatsu Hashimoto, Jacob Andreas, Chelsea Finn
 2024: Yoon Kim, Peter Henderson, John Hewitt, Diyi Yang, Daphne Ippolito
- 2023 – *present* **H2lab Undergraduate Interns Hiring Chair**
 Managed undergraduate interns recruitment process at : Hannaneh Hajishir's group.

Research Community

- 07/2022 **Workshop Lead Organizer**
 NAACL 2022 Workshop on Multilingual Information Access
- 07/2022 **Shared Task Lead Organizer**
 NAACL 2022 MIA Shared Task on Multilingual Open-Retrieval Question Answering
- 07/2023 **Tutorial Co-Instructor**
 ACL 2023 Tutorial on Retrieval-based Language Models and Applications

- 2022 – present **Organizing Committee**
NAACL 2022 Student Volunteer Coordinator
- 2023 – present **Area Chair**
EMNLP 2024
EMNLP 2023
EACL 2023
- 2020 – present **Reviewer**
ACL Rolling Review (ARR) 2021-present
ACL 2020-2023
EMNLP 2019-2023
NeurIPS 2021-2024
NeurIPS Dataset and Benchmark 2024
ICLR 2021-2024
AKBC 2020
AAAI 2020
IJCAI 2021
COLM 2024
EMNLP 2024 WiNLP
EMNLP 2024 Big Picture Workshop
ICLR 2024 ME-FoMo Workshop

Selected Media Coverage

- 07/2024 MIT Technology Review. *Innovators Under 35: A trailblazer in retrieval-augmented generation research is taking on the challenge of preventing hallucinations and elevating LLM reliability by putting external knowledge to use.* [link]
- 07/2024 Forbes. *How RAG-Powered AI Applications Have A Positive Impact On Businesses* [link]
- 02/2024 LangChain Blog. *Self-Reflective RAG with LangGraph* [link]
- 11/2023 Towards Data Science. *How Self-RAG Could Revolutionize Industrial LLMs* [link]
- 10/2022 Allen School News. *Lost in translation no more: IBM Fellowship winner Akari Asai asks — and answers — big questions in NLP to expand information access to all* [link]
- 02/2020 Towards Data Science. *Top Trends of Graph Machine Learning in 2020* [link]
- 02/2020 VentureBeat. *Salesforce's AI navigates Wikipedia to find answers to complex questions* [link]
- 02/2018 MIT Technology Review. *100,000 happy moments – What makes people happy? A huge database is making it possible to discern the answer at last.* [link]

Invited Talks

- 01/2025 University of Pittsburgh, CS Colloquium Series (hosted by Xiang Lorraine Li)

11/2024 MIT Technology Review Japan

11/2024 Carnegie Mellon University, WInE Lab (hosted by Sherry Tongshuang Wu)

05/2024 Microsoft Research India (hosted by Srivathsan Koundinyan)

05/2024 National Institutes of Health (NIH) (hosted by Zhiyong Lu, Ashley Shin)

03/2024 Meta, Smart Glass AI Reading Group (hosted by Kai Sun)

02/2024 University College London, Web Intelligence Group (hosted by Emine Yilmaz)

12/2023 Microsoft Research, Health Futures team (hosted by Naoto Usuyama)

07/2021 Allen School Open House, NLP Research Showcase

10/2023 The University of Edinburgh, Institute for Language, Cognition and Computation (hosted by Papsquale Minervanie)

10/2023 University of Massachusetts Amherst Machine Learning and Friends Lunch (hosted by Dhruv Agarwal)

08/2023 Preferred Networks (hosted by Daisuke Okanohara)

08/2023 Okinawa Institute of Science and Technology (hosted by Makoto Yamada)

08/2023 University of Tokyo, Multi Media Processing Group (hosted by Kiyoharu Aizawa)

08/2023 The University of Queensland Data Science Seminar Series (hosted by Guido Zuccon)

07/2023 The First International Workshop on Retrieval-enhanced Machine Learning at SIGIR, Keynote Talk (hosted by Hamed Zamani)

07/2023 Japanese NLP colloquium (hosted by Naoki Otani)

04/2023 MILA, NLP Reading Group (hosted by Siva Reddy)

03/2023 The AI TALK (hosted by Jingkan Yang)

12/2022 The AI King, Keynote Talk (hosted by Jun Suzuki)

08/2022 Amazon Alexa (hosted by Qiang Ning)

10/2021 University of Amsterdam, Search Engines Amsterdam (hosted by Maarten de Rijke)

07/2021 Apple, Web Answers (hosted by Shayne Longpre)

04/2021 Japanese NLP colloquium (hosted by Naoki Otani)

01/2021 Apple, Web Answers (hosted by Shayne Longpre)

01/2021 Google Research (hosted by Markus N. Rabe, Christian Szegedy)