

EDUCATION     **University of Washington**, Seattle, Washington     September 2019 - Present  
Ph.D. Student, Computer Science and Engineering  
Advisor: Prof. Hannaneh Hajishirzi

**The University of Tokyo**, Tokyo, Japan     March 2019  
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     August 2015 - May 2016  
American and International Study Program (AISP) at Department of Political Science

- PUBLICATIONS
- [1] 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.
  - [2] Beyond Counting Datasets: Investigating Multilingual Dataset Construction and Necessary Resources.  
Xinyan Yu\*, **Akari Asai**\*, Trina Chatterjee, Junjie Hu, Eunsol Choi.  
*Findings of EMNLP*, 2022.
  - [3] 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.
  - [4] 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)*, 2022.
  - [5] 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.
  - [6] 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.
  - [7] 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.
  - [8] 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)*, 2021.
  - [9] 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.

- [10] **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.
- [11] **Wikipedia2Vec: An Optimized Tool for Learning Embeddings of Words and Entities from Wikipedia.**  
Ikuya Yamada, **Akari Asai**, Jin Sakuma, Hiroyuki Shindo, Hideaki Takeda, Yoshiyasu Takefuji, and Yuji Matsumoto.  
*Conference on Empirical Methods in Natural Language Processing (EMNLP, demo)*, 2020.
- [12] **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.
- [13] **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.

- [14] **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.
- [15] **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.
- [16] **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.
- [17] **A Data-Driven Approach to Understanding Happiness**  
**Akari Asai**, Vivian Li, Daniela Stepanov, and Wang-Chiew Tan.  
ACL Widening NLP Workshop, 2017.

PREPRINTS

- [18] **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.
- [19] **Multilingual Extractive Reading Comprehension by Runtime Machine Translation.**  
**Akari Asai**, Akiko Eriguchi, Kazuma Hashimoto, and Yoshimasa Tsuruoka.  
Arxiv Preprint, 2018

RESEARCH  
EXPERIENCE

**University of Washington** Sep 2019-Present, Seattle, WA  
*Ph.D. Student (Supervisor: Hannaneh Hajishirzi)*  
Worked on open-domain question answering [13][7], a first-order logic-guided data training framework for consistent reasoning [12], information-seeking multilingual question answering and retrieval [8][5], multi-modal multi-hop question answering [9] and model efficiency [7][1].

**Meta AI** Jul 2022-Present, Seattle, WA  
*Research Intern (Supervisor: Scott Yih)*  
Currently working on multi-task prompted training for general-purpose retrieval system that can be

adapted to new task without any additional training.

**Allen Institute for AI** Jul 2021-Dec 2021, Seattle, WA  
*Research Intern (Supervisors: Hannaneh Hajishirzi, Matt Gardner)*  
Worked on improving open-domain question answering systems' robustness and performance by learning with evidentiality [4].

**Salesforce Research** Apr 2019-Aug 2019, Palo Alto, CA  
*Research Intern (Supervisors: Kazuma Hashimoto, Caiming Xiong)*  
Worked on a graph-based recurrent reader-retriever for open-domain question answering [13].

**Microsoft Research Asia** Sep 2018-Jan 2019, Beijing, China  
*Research Intern (Supervisors: Duyu Tang, Nan Duan)*  
Worked on incorporating knowledge from multiple knowledge sources and meta-learning for few-shot commonsense reasoning [18].

**Aizawa Yamasaki Lab, The University of Tokyo** Apr 2018-Mar 2019, Tokyo, Japan  
*Thesis Student (Supervisor: Kiyoharu Aizawa)*  
Worked on a separable formulation to estimate uncertainty in deep learning models [14][15].

**Studio Ousia** Mar 2018-Mar 2019, Tokyo, Japan  
*Research Intern (Supervisor: Ikuya Yamada)*  
Worked on general contextualized entity representations for entity-centric NLP tasks [10]. Conducted a comprehensive study and experiments on the performance of **Wikipedia2Vec**, a tool to learn static word and entity representations from Wikipedia [11].

**Tsuruoka Lab, The University of Tokyo** Dec 2017-Mar 2019, Tokyo, Japan  
*Research Assistant (Supervisor: Yoshimasa Tsuruoka)*  
Worked on zero-shot multilingual machine reading comprehension (Japanese and French) [19].

**Megagon Labs** Mar-Apr, 2017, Tokyo, Japan  
*Research Intern (Supervisor: Alon Y. Halevy)*  
Crowd-sourced HappyDB, a corpus of 100,000 happy moments [16]. HappyDB provided the foundation to the **AAAI 2019 CL-AFF Shared Task**.

INDUSTRY EXPERIENCE **Google, Google Chrome Blink team** Aug-Oct 2017, Tokyo, Japan  
*Engineering Intern*  
Extended Selection Modifier, the editing module in the Chrome Browser for selection modification corresponding to users' inputs, to support ShadowDOM v1 [slide] [patches].

**Google, iGSA (Google Search iOS) team** Jun-Oct 2016, Tokyo, Japan  
*Engineering Intern*  
Designed and developed a feature for the Google Search iOS app that provides users with instant access to transit results on the app's home page using Google Search Featured Snippets.

AWARDS **EECS Rising Stars** 2022  
**IBM PhD Fellowship** 2022  
**The Young Researcher Award of the Japanese Association for NLP** 2019  
**The Dean's Award, The Best Bachelor Thesis Award, The University of Tokyo** 2019  
**The Nakajima Foundation Scholarship (Doctoral Study Abroad Program Fellowship)** 2018  
**Women Techmakers Scholarship (Google Anita Borg Memorial Scholarship) Scholar** 2017  
**Finalist, Mercari award and Innovator Prize, JP Hacks 2017** 2017  
**Finalist, Hitachi award, NEC Award and Innovator Prize, JP Hacks 2016** 2016  
**3<sup>rd</sup> Place, Social Entrepreneur Contest, UC Berkeley Challenge Lab (IEOR 185)** 2016

1<sup>st</sup> Place, GEIL, All-Japan policy making contest

2015

TEACHING AND LEADERSHIP EXPERIENCE **Co-organizer & TA, Todai Girls Hackathon 2017**, UTokyo June - Oct 2017, Tokyo  
Organized a hackathon for female students to foster interest and improve inclusivity and diversity in CS and related majors at UTokyo. Taught lectures on Android app development and Java.

**Invited Speaker, Mind The Gap**, Google Aug 2016 / Sept 2017, Tokyo  
Invited as panelist and presenter to Mind The Gap, a project that teaches female high school students programming and empowers them to major in Computer Science and pursue careers in tech.

SERVICES **Workshop Lead Organizer:** Workshop on Multilingual Information Access (MIA), NAACL 2022.  
**Shared-task Lead Organizer:** MIA 2022 Shared task, NAACL 2022.  
**Area Chair:** EACL 2023  
**Reviewer/Program Committee:** EMNLP 2019/2020/2021/2022, ACL 2020/2021/2022, AKBC 2020, AAAI 2020, IJCAI 2021, NeurIPS 2021/2022, ICLR 2021/2022, ARR 2021-Present.  
**UW CSE:** PhD Admission Committee Member (2021), PhD Admission NLP Area Chair (2021), Diversity and Inclusion Committee Representatives (2022-Present)

MENTORING Velocity Yu, UW CSE BS student → Meta AI Resident [2][5]. Apr 2021-June 2022  
Alex Mallen, a UW CSE BS student. Apr 2022-Present  
Daniel Kim, a UW CSE Ph.D. student. Sept 2022-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 **Amazon (Alexa): Towards Better Multilingual Information Access** Virtual, August, 2021  
**SEA: Search Engines Amsterdam & Apple (Web Answers): One Question Answering Model for Many Languages with Cross-lingual Passage Retrieval** Virtual, October & July, 2021  
**Google Language & Apple (Web Answers): XOR QA: Cross-lingual Open-Retrieval Question Answering** Virtual, January, 2021  
**Google: Learning to Retrieve Reasoning Paths over Wikipedia Graphs** Virtual, June, 2020

PRESS & MEDIA **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

COMPETENCIES **Languages** Japanese (*native*), English (*fluent*, TOEFL 104), Mandarin (*basic*)  
**Programming** Python, C/C++, Java, Matlab, Octave, R, Objective-C, Swift, JavaScript, Lisp, Perl  
**Libraries and Services** Tensorflow, PyTorch, Chainer, Theano, Stanford CoreNLP, NLTK, Amazon Mechanical Turk, Microsoft Azure, Amazon Web Service, Google Cloud Platform