

Sewon Min

Paul G. Allen School of Computer Science & Engineering
University of Washington
185 NE Stevens Way
Seattle, WA 98195

Home: <http://shmsw25.github.io/>
Email: sewon@cs.washington.edu
Github: [/shmsw25](#)
Skype: shmsw25

Education

09/2018–Current Ph.D. candidate, Computer Science & Engineering, University of Washington
Supervisors: Hannaneh Hajishirzi, Luke Zettlemoyer

03/2020 M.Sc., Computer Science & Engineering, University of Washington

03/2014–08/2018 B.Sc., Computer Science & Engineering, Seoul National University
Summa Cum Laude, Rank: 1st in the department

Employment

09/2018–Current Research assistant, University of Washington
Supervisors: Hannaneh Hajishirzi, Luke Zettlemoyer

06/2023–12/2023,
04/2021–03/2023 Visiting researcher/research intern, Meta AI (Facebook AI Research)
10/2019–08/2020 Host: Luke Zettlemoyer

09/2020–03/2021 Research intern/student researcher, Google AI Research
Hosts: Kenton Lee, Kristina Toutanova / Collaborator: Ming-Wei Chang

11/2017–02/2018 Research intern, Salesforce Research (formerly Metamind)
Host: Caiming Xiong

10/2016–02/2017 Undergraduate research assistant, University of Washington
Supervisor: Hannaneh Hajishirzi

07/2016–08/2016 Undergraduate intern, Vision & Learning Lab, Seoul National University
Supervisor: Gunhee Kim

Honors & Awards

2023 Microsoft Accelerate Foundation Models Research Grant

2023 Best Paper Honorable Mentions, ACL 2023

2022 EECS Rising Stars

2022–2023 JP Morgan Ph.D. Fellowship

2018–2023 Doctoral Study Fellowship granted by Korea Foundation for Advanced Studies (KFAAS)

2019, 2021 Outstanding Reviewer (EMNLP 2019, ACL 2021, EMNLP 2021)

2018–2019 Wissner-Slivka Endowed Graduate Fellowship granted by Paul G. Allen School

2018 Best Undergraduate Thesis Award granted by CSE, Seoul National University

2014–2018 Full Scholarship for all semesters attended at Seoul National University (merit-based)

2017 Internship Abroad Support Fund granted by Seoul National University

2017 Samsung Convergence Software Course Mentor Scholarship

Publications

GScholar <https://scholar.google.com/citations?user=jU4IZs4AAAAJ>
Semantic Scholar <https://www.semanticscholar.org/author/Sewon-Min/48872685>

* denotes equal contributions

Peer-Reviewed Conference/Journal Papers

- [C28] Sewon Min*, Kalpesh Krishna*, Xinxu Lyu, Mike Lewis, Wen-tau Yih, Pang Wei Koh, Mohit Iyyer, Luke Zettlemoyer, Hannaneh Hajishirzi. “FActScore: Fine-grained Atomic Evaluation of Factual Precision in Long Form Text Generation.” In: *Proceedings of EMNLP (long)*. 2023. [pdf]
- [C27] Ofir Press, Muru Zhang, Sewon Min, Ludwig Schmidt, Noah A. Smith, Mike Lewis. “Measuring and Narrowing the Compositionality Gap in Language Models.” In: *Proceedings of Findings of EMNLP (long)*. 2023. [pdf]
- [C26] Boshi Wang, Sewon Min, Xiang Deng, Jiaming Shen, You Wu, Luke Zettlemoyer, Huan Sun. “Towards Understanding Chain-of-Thought Prompting: An Empirical Study of What Matters.” In: *Proceedings of ACL (long)*. 2023. 🏆 **Best Paper Honorable Mentions. ACL 2023’s Most Influential Paper #13.** [pdf]
- [C25] Xinxu Lyu, Sewon Min, Iz Beltagy, Luke Zettlemoyer, Hannaneh Hajishirzi. “Z-ICL: Zero-Shot In-Context Learning with Pseudo-Demonstrations.” In: *Proceedings of ACL (long)*. 2023. [pdf]
- [C24] Sewon Min, Weijia Shi, Mike Lewis, Xilun Chen, Wen-tau Yih, Hannaneh Hajishirzi, Luke Zettlemoyer. “Non-parametric Masked Language Modeling.” In: *Proceedings of Findings of ACL (long)*. 2023. [pdf]
- [C23] Xinyan Velocity Yu, Sewon Min, Luke Zettlemoyer, Hannaneh Hajishirzi. “CREPE: Open-Domain Question Answering with False Presuppositions.” In: *Proceedings of ACL (long)*. 2023. [pdf]
- [C22] Zeqiu Wu, Ryu Parish, Hao Cheng, Sewon Min, Prithviraj Ammanabrolu, Mari Ostendorf, Hannaneh Hajishirzi. “INSCIT: Information-Seeking Conversations with Mixed-Initiative Interactions.” In: *TAACL*. 2023. [pdf]
- [C21] Chenglei Si, Chen Zhao, Sewon Min, Jordan Boyd-Graber. “Re-Examining Calibration: The Case of Question Answering.” In: *Proceedings of Findings of EMNLP (long)*. 2022. [pdf]
- [C20] Anas Awadalla, Mitchell Wortsman, Gabriel Ilharco, Sewon Min, Hannaneh Hajishirzi, Ludwig Schmidt. “Exploring The Landscape of Distributional Robustness for Question Answering Models.” In: *Proceedings of Findings of EMNLP (long)*. 2022. [pdf]
- [C19] Sewon Min, Xinxu Lyu, Ari Holtzman, Mikel Artetxe, Mike Lewis, Hannaneh Hajishirzi, Luke Zettlemoyer. “Re-thinking the Role of Demonstrations: What makes In-context Learning Work?” In: *Proceedings of EMNLP (long)*. 2022. **EMNLP 2022’s Most Influential Paper #1.** [pdf]
- [C18] Daniel Khashabi, Xinxu Lyu, Sewon Min, Lianhui Qin, Kyle Richardson, Sameer Singh, Sean Welleck, Hannaneh Hajishirzi, Tushar Khot, Ashish Sabharwal, Yejin Choi. “Prompt Waywardness: The Curious Case of Discretized Interpretation of Continuous Prompts.” In: *Proceedings of NAACL-HLT (long)*. 2022. [pdf]
- [C17] Sewon Min, Mike Lewis, Luke Zettlemoyer, Hannaneh Hajishirzi. “MetaICL: Learning to Learn In Context.” In: *Proceedings of NAACL-HLT (long)*. 2022. **NAACL 2022’s Most Influential Paper #3.** [pdf]
- [C16] Sewon Min, Mike Lewis, Hannaneh Hajishirzi, Luke Zettlemoyer. “Noisy Channel Language Model Prompting for Few-Shot Text Classification.” In: *Proceedings of ACL (long)*. 2022. **ACL 2022’s Most Influential Paper #12.** [pdf]
- [C15] Jungsoo Park*, Sewon Min*, Jaewoo Kang, Luke Zettlemoyer, Hannaneh Hajishirzi. “FAVIQ: FAct Verification from Information-seeking Questions.” In: *Proceedings of ACL (long)*. 2022. [pdf]
- [C14] Sewon Min, Kenton Lee, Ming-Wei Chang, Kristina Toutanova, Hannaneh Hajishirzi. “Joint Passage Ranking for Diverse Multi-Answer Retrieval.” In: *Proceedings of EMNLP (long)*. 2021. [pdf]
- [C13] Sewon Min, Jordan Boyd-Graber, Chris Alberti, Danqi Chen, Eunsol Choi, Michael Collins, Kelvin Guu, Hannaneh Hajishirzi, Kenton Lee, Jennimaria Palomaki, Colin Raffel, Adam Roberts, Tom Kwiatkowski (with EfficientQA participants). “NeurIPS 2020 EfficientQA Competition: Systems, Analyses and Lessons Learned.” In: *Proceedings of Machine Learning Research (PMLR)*. 2021. [pdf]
- [C12] Srinivasan Iyer, Sewon Min, Yashar Mehdad, Wen-tau Yih. “ReConsider: Re-Ranking using Span-Focused Cross-Attention for Open Domain Question Answering.” In: *Proceedings of NAACL-HLT (short)*. 2021. [pdf]
- [C11] Belinda Z. Li, Sewon Min, Srinivasan Iyer, Yashar Mehdad and Wen-tau Yih. “Efficient One-Pass End-to-End Entity Linking for Questions.” In: *Proceedings of EMNLP (short)*. 2020. [pdf]
- [C10] Sewon Min, Julian Michael, Hannaneh Hajishirzi, Luke Zettlemoyer. “AmbigQA: Answering Ambiguous Open-domain Questions.” In: *Proceedings of EMNLP (long)*. 2020. [pdf]
- [C9] Vladimir Karpukhin*, Barlas Oguz*, Sewon Min, Patrick Lewis, Ledell Wu, Sergey Edunov, Danqi Chen, Wen-tau Yih. “Dense Passage Retrieval for Open-domain Question Answering.” In: *Proceedings of EMNLP (long)*. 2020. **EMNLP 2020’s Most Influential Paper #1.** [pdf]

- [C8] Daniel Khashabi, **Sewon Min**, Tushar Khot, Ashish Sabharwal, Oyvind Tafjord, Peter Clark and Hannaneh Hajishirzi. “UnifiedQA: Crossing Format Boundaries With a Single QA System.” In: *Proceedings of Findings of EMNLP (long)*. 2020. [EMNLP 2020’s Most Influential Paper #6](#). [pdf]
- [C7] **Sewon Min**, Danqi Chen, Hannaneh Hajishirzi, Luke Zettlemoyer. “A Discrete Hard EM Approach for Weakly Supervised Question Answering.” In: *Proceedings of EMNLP (long)*. 2019. [pdf]
- [C6] **Sewon Min**, Victor Zhong, Luke Zettlemoyer, Hannaneh Hajishirzi. “Multi-hop Reading Comprehension through Question Decomposition and Rescoring.” In: *Proceedings of ACL (long)*. 2019. [pdf]
- [C5] **Sewon Min***, Eric Wallace*, Sameer Singh, Matt Gardner, Hannaneh Hajishirzi, Luke Zettlemoyer. “Compositional Questions Do Not Necessitate Multi-hop Reasoning.” In: *Proceedings of ACL (short)*. 2019. [pdf]
- [C4] **Sewon Min**, Victor Zhong, Richard Socher, Caiming Xiong. “Efficient and Robust Question Answering from Minimal Context over Documents.” In: *Proceedings of ACL (long)*. 2018. [pdf]
- [C3] Minjoon Seo*, **Sewon Min***, Ali Farhadi, Hannaneh Hajishirzi. “Neural Speed Reading via Skim-RNN.” In: *Proceedings of ICLR*. 2018. [pdf]
- [C2] **Sewon Min**, Minjoon Seo, Hannaneh Hajishirzi. “Question Answering through Transfer Learning from Large Fine-grained Supervision Data.” In: *Proceedings of ACL (short)*. 2017. [pdf]
- [C1] Minjoon Seo, **Sewon Min**, Ali Farhadi, Hannaneh Hajishirzi. “Query-Reduction Networks for Question Answering.” In: *Proceedings of ICLR*. 2017. [pdf]

Tutorials

- [T3] Akari Asai, **Sewon Min**, Zexuan Zhong, Danqi Chen. “Retrieval-based Language Models and Applications.” In: *Proceedings of ACL (Tutorial)*. 2023. [pdf]
- [T2] Iz Beltagy, Arman Cohan, Robert L. Logan IV, **Sewon Min**, Sameer Singh. “Zero- and Few-Shot NLP with Pre-trained Language Models.” In: *Proceedings of ACL (Tutorial)*. 2022. [pdf]
- [T1] Iz Beltagy, Arman Cohan, Hannaneh Hajishirzi, **Sewon Min**, Matthew E. Peters. “Beyond Paragraphs: NLP for Long Sequences.” In: *Proceedings of NAACL-HLT (Tutorial)*. 2021. [pdf]

Peer-Reviewed Workshop Papers

- [W2] Rulin Shao, **Sewon Min**, Luke Zettlemoyer, Pang Wei Koh. “Retrieval-based Language Models Using a Multi-domain Datastore.” In: *Proceedings of Workshop on Distribution Shifts (DistShift) @ NeurIP (Non-archival)*. 2023.
- [W1] Matt Gardner, Jonathan Berant, Hannaneh Hajishirzi, Alon Talmor, **Sewon Min**. “On Making Reading Comprehension More Comprehensive.” In: *Proceedings of Workshop on Machine Reading for Question Answering (MRQA) @ EMNLP*. 2019. [pdf]

Preprints

- [P6] Weijia Shi, **Sewon Min**, Maria Lomeli, Chunting Zhou, Margaret Li, Xi Victoria Lin, Noah A. Smith, Luke Zettlemoyer, Wen-tau Yih, Mike Lewis. “In-Context Pretraining: Language Modeling Beyond Document Boundaries.” *arXiv preprint*. 2023. [pdf]
Submitted to ICLR 2024 (top 1.5% in initial scores).
- [P5] Qingqing Cao, **Sewon Min**, Yizhong Wang, Hannaneh Hajishirzi. “BTR: Binary Token Representations for Efficient Retrieval Augmented Language Models.” *arXiv preprint*. 2023. [pdf]
Submitted to ICLR 2024 (top 5.3% in initial scores).
- [P4] **Sewon Min***, Suchin Gururangan*, Eric Wallace, Weijia Shi, Hannaneh Hajishirzi, Noah A. Smith, Luke Zettlemoyer. “SILO Language Models: Isolating Legal Risk in a Nonparametric Datastore.” *arXiv preprint*. 2023. [pdf]
Submitted to ICLR 2024 (top 1.1% in initial scores).
Oral presentation at the Regulatable ML Workshop at NeurIPS 2023.
Spotlight presentation at the Workshop on Distribution Shifts (DistShift) at NeurIPS 2023.
- [P3] Weijia Shi, **Sewon Min**, Michihiro Yasunaga, Minjoon Seo, Rich James, Mike Lewis, Luke Zettlemoyer, Wen-tau Yih. “REPLUG: Retrieval-Augmented Black-Box Language Models.” *arXiv preprint*. 2023. [pdf] **Submitted to ACL Rolling Review.**
- [P2] **Sewon Min**, Danqi Chen, Luke Zettlemoyer, Hannaneh Hajishirzi. “Knowledge Guided Text Retrieval and Reading for Open Domain Question Answering.” *arXiv preprint*. 2019. [pdf]

[P1] Matt Gardner, Jonathan Berant, Hannaneh Hajishirzi, Alon Talmor, **Sewon Min**. “Question Answering is a Format; When is it Useful?.” *arXiv preprint*. 2019. [[pdf](#)]

Invited Talks

(External talks only)

- 12/2023 (Expected) [Big Picture Workshop](#) at EMNLP 2023
Title: *The Role of Demonstrations: What In-Context Learning Actually Needs*
- 09/2023 UMass Amherst NLP Group (Host: Mohit Iyyer)
Title: *Redesigning the Softmax: Nonparametric Prediction in Language Modeling*
- 09/2023 Privacy in ML Seminar, Google Deepmind (Host: Sewoong Oh)
Title: *SILO Language Models: Isolating Legal Risk in a Nonparametric Datastore*
- 09/2023 IBS Data Science Group, KAIST (Host: Meeyoung Cha)
Title: *SILO Language Models: Isolating Legal Risk in a Nonparametric Datastore*
- 06/2023 Microsoft Semantic Machines (Host: Hao Fang)
Title: *FACTScore: Fine-grained Atomic Evaluation of Factual Precision in Long Form Text Generation*
- 03/2023 Gradient Podcast Interview (Host: Daniel Bashir)
- 02/2023 Conversation & Reasoning Group, Meta (Host: Zhe Zhang)
Title: *Nonparametric Masked Language Modeling*
- 12/2022 Data Science & Business Analytics Lab, Korea University (Host: Pilsung Kang)
Title: *Open-domain, Open-ended Question Answering*
- 10/2022 ISI NL Seminar, University of Southern California (Host: Jonathan May)
Title: *Understanding and Improving Learning through Inference with Large Language Models*
- 07/2022 MLOPT Research Group, University of Wisconsin–Madison (Host: Kangwook Lee)
Title: *Understanding and Improving Learning through Inference with Large Language Models*
- 04/2022 Language & Intelligence Lab, MIT (Host: Jacob Andreas)
Title: *Understanding and Improving Learning through Inference with Large Language Models*
- 12/2021 Hyundai AIRS (Host: Cheoneum Park)
Title: *Learning from limited data at inference time*
- 10/2021 Facebook AI (Host: Zornitsa Kozareva)
Title: *Learning from limited data at inference time*
- 08/2021 AI Summer School, Seoul National University (Host: Hyun Oh Song)
Title: *Toward Real-world Natural Language Understanding*
- 08/2021 Summer AI Seminar Series, Postech (Host: Gary Geunbae Lee)
Title: *Toward Real-world Natural Language Understanding*
- 04/2021 Colloquium Talk, Graduate School of AI at KAIST (Host: Juho Lee)
Title: *Answering Open-domain, Information-seeking Questions from Text*
- 02/2021 School of Electronic Engineering at KAIST (Host: Sung-Ju Lee)
Title: *Answering Open-domain, Information-seeking Questions from Text*
- 09/2020 Apple (Hosts: Chris DuBois and Shayne Longpre)
- 08/2020 Facebook NLP Summit, Question Answering Workshop (Host: Yashar Mehdad)
- 08/2018 Kakao Brain (Host: Benjamin Lee)
- 08/2018 Samsung Advanced Institute of Technology (Host: Jehun Jeon)
- 08/2017 NAVER (Host: Sung Kim)

Teaching

Tutorial Co-instructor

ACL 2023	Retrieval-based Language Models and Applications with Akari Asai, Zexuan Zhong and Danqi Chen
ACL 2022	Zero- and Few-Shot NLP with Pretrained Language Models with Iz Beltagy, Arman Cohan, Sameer Singh and Robert Logan
NAACL-HLT 2021	Beyond Paragraphs: NLP for Long Sequences with Iz Beltagy, Arman Cohan, Hannaneh Hajishirzi and Matthew E. Peters

Teaching Assistant

Spring 2022	CSE 573 Artificial Intelligence, University of Washington Instructor: Hannaneh Hajishirzi
Winter 2021	CSE 447+517 Natural Language Processing, University of Washington Instructor: Noah Smith

Guest Lecturer

Fall 2023	CPSC 488/588 AI Foundation Models, Yale University Instructor: Arman Cohan Topic: Retrieval-based Language Modeling
Winter 2023	CSE 447 Natural Language Processing, University of Washington Instructor: Sofia Serrano Topic: Zero- and Few-shot NLP with Pretrained Language Models
Winter 2023	CSE 573 Artificial Intelligence, University of Washington Instructor: Hannaneh Hajishirzi
Spring 2022	CSE 573 Artificial Intelligence, University of Washington Instructor: Hannaneh Hajishirzi

Predocctoral Student Mentoring

01/2023–Current	Michael Duan, BS student at UW
09/2021–Current	Xinxi (Shane) Lyu, BS→MS student at UW→predocctoral young investigator at AI2
12/2021–12/2022	Xinyan (Velocity) Yu, BS→MS student at UW; now a Ph.D. student at USC
06/2021–12/2021	Skyler Hallinan, BS→MS student at UW
01/2021–07/2021	Jungsoo Park, MS student at Korea University; now at NAVER
02/2020–08/2020	Belinda Li, software engineer at Facebook; now a PhD student at MIT

Professional Services

Workshop Co-organizer

ICLR 2024 (Under review)	2nd Workshop on Mathematical and Empirical Understanding of Foundation Models (ME-FoMo)
ACL 2022	7th Workshop on Representation Learning for NLP (Repl4NLP)
ACL 2022	Semiparametric Methods in NLP: Decoupling Logic from Knowledge (Spa-NLP)
EMNLP 2021	3rd Workshop on Machine Reading for Question Answering (MRQA)
AKBC 2021	2nd Workshop on Unstructured and Structured KBs (USKB)
NeurIPS 2020	Competition on Efficient Open-Domain Question Answering (EfficientQA)
AKBC 2020	Workshop on Unstructured and Structured KBs (USKB)

Area Chair ACL 2023, EMNLP 2023, COLING 2022

Reviewer/Program Committee

Journals:

- Transactions of the Association for Computational Linguistics (TACL; 2022–)
- Transactions on Machine Learning Research (TMLR; 2022–)
- Journal of Artificial Intelligence Research (JAIR; 2023)

Conferences: ([†] denotes outstanding reviewer)

- ACL (2019, 2020, 2021[†])
- EMNLP (2019[†], 2020, 2021[†], 2022)
- NAACL (2021)
- AACL (2020)
- ACL Rolling Review (2021, 2022, 2023)
- NeurIPS (2018, 2020, 2021, 2022)
- ICLR (2019, 2020, 2021, 2022, 2023)
- ICML (2021, 2023)
- AAAI (2020, 2021)
- AKBC (2019, 2020, 2021, 2022)

Workshops:

- Workshop on Distribution Shifts: NeurIPS 2023
- Workshop on Retrieval-Enhanced Machine Learning: SIGIR 2023
- Workshop on Mathematical and Empirical Understanding of Foundation Models: ICLR 2023
- Workshop on Knowledge Retrieval and Language Models: ICML 2022
- Student Research Workshop: ACL 2019, ACL 2020, AACL 2020, EACL 2021, NAACL 2021, ACL 2021
- Workshop on NLP for Positive Impact: ACL 2021, EMNLP 2022
- The 2nd Workshop on Machine Reading for Question Answering: EMNLP 2019

Competition Track, NeurIPS 2021

Departmental Service

- 2021–2023 UW CSE: Admission Committee Member for the Ph.D. Program
- 2021 UW NLP: Student Co-organizer of the Invited Talk Series
- 2021 UW NLP: Student Co-organizer of the NLP Retreat
- 2019 UW CSE: Prospective Student Committee Co-Chair for the Ph.D. Program