Sewon **Min**

PH.D. STUDENT, PAUL G. ALLEN SCHOOL OF COMPUTER SCIENCE & ENGINEERING

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Research Interest

- *Natural Language Processing* and *Machine Learning*, specialized in question answering, natural language understanding, knowledge representation and information retrieval.
- My primary goal of research is to understand naturally-occurring language (such as information-seeking questions), from defining tasks to building machine learning models.

Education

University of Washington   *Seattle, WA*
Ph.D. student in Computer Science & Engineering   *Sep 2018 - Current*
M.S. in Computer Science & Engineering   *Mar 2020*
- Advisers: Hannaneh Hajishirzi, Luke Zettlemoyer

Seoul National University   *Seoul, Korea*
B.S. in Computer Science & Engineering (Summa Cum Laude)   *Mar 2014 - Aug 2018*
- Thesis Adviser: Gunhee Kim
- GPA : 4.12/4.30 (total), 4.19/4.30 (major), graduated in 1st rank in CSE

University of Washington   *Seattle, WA*
Exchange student   *Sep - Dec 2016*

Gyeonggi Science High School   *Suwon, Korea*
Specialized high school for students talented in math and science   *Feb 2011 - Feb 2014*

Publications

* denotes equal contributions

PEER-REVIEWED CONFERENCE PAPERS

[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. [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. [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]

Peer-Reviewed Workshop Papers

[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

[P4] **Sewon Min**, Kenton Lee, Ming-Wei Chang, Kristina Toutanova, Hannaneh Hajishirzi. "Joint Passage Ranking for Diverse Multi-Answer Retrieval". *arXiv preprint*. 2021. [pdf]

[P3] **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". *arXiv preprint*. 2021. [pdf]

[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]

Research Experience

University of Washington *Seattle, WA*
Research assistant (Supervisors: Hannaneh Hajishirzi, Luke Zettlemoyer) *Sep 2018 - Current*

Google AI Research *Seattle, WA*
Research intern/student researcher (Supervisors: Kenton Lee, Kristina Toutanova) *Sep 2020 - Mar 2021*

Facebook AI Research (FAIR) *Seattle, WA*
Visiting student researcher (Supervisor: Luke Zettlemoyer) *Oct 2019 - Sep 2020*

Salesforce Research (Metamind) *Palo Alto, CA*
Research intern (Supervisor: Caiming Xiong) *Nov 2017 - Feb 2018*

University of Washington *Seattle, WA*
Research intern (Supervisors: Hannaneh Hajishirzi, Ali Farhadi) *Oct 2016 - Feb 2017*

Seoul National University   *Seoul, Korea*
Intern at Vision & Learning Lab (Supervisor: Gunhee Kim)   *Jul - Aug 2016*

Seoul National University   *Seoul, Korea*
Undergraduate Research Opportunity Program participant (Supervisor: Sang-goo Lee)   *Feb - Jun 2016*

Honors & Awards

DURING PHD

Doctoral Study Fellowship granted by Korea Foundation for Advanced Studies (KFAS)   *2018 - 2023*
Wissner-Slivka Endowed Graduate Fellowship granted by Paul G. Allen School   *2018 - 2019*

BEFORE PHD

Best Undergraduate Thesis Award granted by CSE, Seoul National University   *2018*
Full Scholarship for all semesters attended at Seoul National University (merit-based) *2014 - 2018*
ICLR Travel Award   *2018*
Google Travel Grants   *2017, 2018*
Internship Abroad Support Fund granted by Seoul National University   *2017*
Samsung Convergence Software Course Mentor Scholarship   *2017*

Services

- Co-organizer: The 3rd Workshop on Machine Reading for Question Answering (MRQA @ EMNLP 2021) [link]

- Co-organizer: Competition on Efficient Open-Domain Question Answering (EfficientQA @ NeurIPS 2020) [link]

- Co-organizer: Workshop on Unstructured and Structured KBs (USKB @ AKBC 2020) [link]

- Reviewer/Program Committee
  - *CL/NLP conferences: ACL (2019, 2020, 2021), EMNLP (2019, 2020, 2021), AKBC (2019, 2020), AACL (2020), NAACL (2021)
  - ML/AI conferences: NeurIPS (2018, 2020, 2021), ICLR (2019, 2020, 2021, 2022), AAAI (2020, 2021), ICML (2021)
  - Workshops: Student Research Workshop (SRW @ ACL 2019, SRW @ ACL 2020, SRW @ AACL 2020, SRW @ EACL 2021, SRW @ NAACL 2021, SRW @ ACL 2021), The 2nd Workshop on Machine Reading for Question Answering (MRQA @ EMNLP 2019)
  - Competition Track, NeurIPS 2021

- Prospective Student Committee Chair for UW CSE Ph.D. Program (2019)

- Admission Committee Member for UW CSE Ph.D. Program (2021)

Invited Talks

Colloquium Talk, Graduate School of AI at KAIST, Korea   *Apr 2021*
School of Electronic Engineering at KAIST, Korea   *Feb 2021*
Apple (Web Answers team), Seattle, WA   *Sep 2020*
Facebook NLP Summit, Question Answering Workshop   *Aug 2020*
Kakao Brain, Korea   *Aug 2018*
Samsung Advanced Institute of Technology, Korea   *Aug 2018*
Naver, Korea   *Aug 2017*

Teaching Experience

Teaching assistant at University of Washington
- CSE 447+517 Natural Language Processing (Instructor: Noah Smith) *Winter 2021*
    - In addition to typical TA role, oversee the 517 Reproducibility Project and guide submissions to the ML Reproducibility Challenge

Mentor at Samsung Convergence Software Course *Mar - Jun 2017*
- Program for non-major students with courses in computer science & engineering

Personal tutor *Dec 2013 - Oct 2017*
- Teach mathematics, physics, programming (Java; Python; Javascript) and computer science (Data Structure; Algorithms) to middle school, high school and university students.