Seo, Minjoon

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Research Statement

My research interest is primarily in natural language processing. I am especially interested in the understanding of natural language in the presence of visual information, such as images or diagrams. As such, for my qualifying evaluation project, I worked on devising a system that understands and solves high school geometry problems, in which the system uses diagram information to improve text parsing [1], and vice versa [3]. I am also interested in semantic parsing, machine reading, and information extraction.

Education

University of Washington Sep 2013 –
Ph.D. in Computer Science
Advisers: Hannaneh Hajishirzi, Ali Farhadi, Oren Etzioni

University of Washington Sep 2013 – Dec 2015
M.S. in Computer Science
Cumulative GPA: 3.72/4.0

University of California, Berkeley Aug 2008 – May 2012
B.S. in Electrical Engineering & Computer Science
Cumulative GPA: 3.94/4.0

Publications

[1] Minjoon Seo, Hannaneh Hajishirzi, Ali Farhadi, Oren Etzioni, and Clint Malcolm. "Solving geometry problems: combining text and diagram interpretation". In: *Proceedings of EMNLP*. 2015.

[2] Lilian de Greef, Mayank Goel, Minjoon Seo, Eric C Larson, James W Stout, James A Taylor, and Shwetak N Patel. "Bilicam: using mobile phones to monitor newborn jaundice". In: *Proceedings of UbiComp*. 2014.

[3] Minjoon Seo, Hannaneh Hajishirzi, Ali Farhadi, and Oren Etzioni. "Diagram understanding in geometry questions". In: *Proceedings of AAAI*. 2014.

[4] David A Moore, Kevin M Mayeda, Steve M Myers, Minjoon Seo, and Stuart J Russell. "Progress in signal-based bayesian monitoring". In: *Proceedings of the 2012 monitoring research review: ground-based nuclear explosion monitoring technologies*. 2012.

Employment

Allen Institute for Artificial Intelligence Mar – June 2015, June – Sept 2014
Research Intern (advisers: Oren Etzioni, Ali Farhadi)
Project Euclid: we devised an end-to-end system that solves geometry problems in college entrance exam (SAT) with SAT score of 49% [1]. I also worked on Project Euclid as a research assistant in University of Washington.

Seoul National University, Korea Aug – Sept 2013
Research Intern (adviser: Young-gil Shin)
We devised Markov-chain-based algorithm for slice-matching the medical images of patient torsos with accuracy of 95%.

Oracle Corporation Aug 2012 – May 2013
Software Engineer
Developed tools for verifying the operating system of Oracle's switches.

Symantec Corporation May 2011 – Aug 2011
Software Engineering Intern
Developed tools for debugging Semantic Enterprise Protection.

Honors and Awards

- Best Paper Nomination [2], UbiComp 2014
- Graduated with Highest Honors (Summa cum Laude), UC Berkeley, 2012

Services

- University of Washington NLP Group Organizing Team (2014-2015)
- Subreviewer: AAAI (2014, 2015, 2016)

References

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Ali Farhadi
Assistant Professor, University of Washington
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