

Woohwan Jung

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RESEARCH INTERESTS

My research interests lie in the fields of natural language processing and automated knowledge base construction. Specifically, my research aims to develop machine learning techniques to construct knowledge bases from textual data with noisy labels. I'm currently working on developing models and training methods for relation extraction using weak supervision.

Keywords: natural language processing, machine learning, weak supervision, active learning, knowledge base construction, differential privacy

EDUCATION

Seoul National University,

- M.S. and Ph.D. in Electrical and Computer Engineering Mar 2012 – Feb 2021 (Expected)
 - Adviser: Prof. Kyuseok Shim

Seoul National University,

- B.S. in Electrical and Computer Engineering Mar 2007 – Feb 2012
 - Cumulative GPA: 3.05 / 4.3

PUBLICATIONS

Machine learning

- **Woohwan Jung**, and Kyuseok Shim, "Dual Supervision Framework for Relation Extraction with Distant Supervision and Human Annotation." [COLING 20] (Outstanding paper)
- **Woohwan Jung**, and Kyuseok Shim, "T-REX: A Topic-Aware Relation Extraction Model." [CIKM'20] (Short)
- **Woohwan Jung**, Younghoon Kim and Kyuseok Shim, "Crowdsourced Truth Discovery in the Presence of Hierarchies for Knowledge Fusion." [EDBT 19]
- Younghoon Kim, **Woohwan Jung** and Kyuseok Shim, "Integration of graphs from different data sources using crowdsourcing." [Information Sciences 17]

Differential privacy

- Daeyoung Hong, **Woohwan Jung**, and Kyuseok Shim, "Collecting Geospatial Data for Personalized Services with Local Differential Privacy." [ICDE 21] (Accepted as a short paper)
- **Woohwan Jung**, Suyong Kwon and Kyuseok Shim, "TIDY: Publishing a Time Interval Dataset with Differential Privacy." [TKDE 20]

AWARDS & SCHOLARSHIPS

- Outstanding Paper Award (COLING 2020) Dec 2020
28th International Conference on Computational Linguistics (16/2180 submissions).
- Student Travel Grant (CIKM 2020) Oct 2020
29th ACM International Conference on Information and Knowledge Management.
- National Scholarship for Science and Engineering 2007 – 2009
Korea Student Aid Foundation (KOSAF), South Korea

EXPERIENCE

Hubrite, Seoul, Korea

- Web developer Mar 2010 – Feb 2011
- Web developer (Intern) Jan 2010 – Feb 2010

RECENT RESEARCH PROJECTS

- Development of cloud robot intelligence augmentation, sharing and framework technology to integrate and enhance the intelligence of multiple robots (LG Electronics, The Ministry of Science and ICT) Apr 2020 – Present
- AI-based High Performance Database Management Systems (The Ministry of Science and ICT) Mar 2020 – Present

- Development of Enabling Software Technology for Integration and Inference Using Web-scale Big Complex Type Data (NAVER, The Ministry of Science and ICT) Sep 2017 – Dec 2020
- A Development of Deidentification Technique based on Differential privacy (The Ministry of Science and ICT) Apr 2017 – Dec 2019
- Data Integration using Crowdsourcing and Semantic Relations (The Ministry of Education) Nov 2016 – Oct 2019

SERVICES

- Reviewer: IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)
- Reviewer: Information Sciences Journal

SKILLS

Python, Java, PyTorch, SQL, Django, C++, Hadoop, Kotlin

[2020-12-23]