Yeon Seonwoo

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RESEARCH TOPICS

My primary area of research interest is machine learning for NLP. I have proven the additive compositionality of word vectors and built a novel word embedding model based on the proof. I published this research at a workshop at EMNLP 2019. Also, I have extended Poisson point processes to cluster documents with topic and publication time information. This research models temporal fluctuation patterns of social interest with publication time of news articles. I published this research at EMNLP 2018. My other research topic is a domain adaptation method to utilize linguistic features in internal layers of contextualized word embeddings.

EDUCATION

Ph.D. Student, Advisor: Prof. Alice Oh, Sep 2017 - Present **KAIST**
School of Computing, Daejeon, Republic of Korea

M.S., Advisor: Prof. Alice Oh, Mar 2016 - Aug 2017 **KAIST**
Thesis title: "Event Prediction Using Vector Representation in Hawkes Processes"
School of Computing, Daejeon, Republic of Korea

B.S., Mar 2012 - Feb 2016 **Sungkyunkwan Univ**
Computer Science and Engineering, Suwon, Republic of Korea

PUBLICATION

Yeon Seonwoo, Sungjoon Park, Dongkwan Kim, and Alice Oh. "Additive Compositionality of Word Vectors." Workshop on Noisy User-generated Text at EMNLP 2019.

Sungjoon Park, **Yeon Seonwoo**, Jiseon Kim, Jooyeon Kim and Alice Oh. "Denoising Recurrent Neural Networks for Classifying Crash-Related Events." IEEE Transactions on Intelligent Transportation Systems. 2019.

Yeon Seonwoo, Sungjoon Park, and Alice Oh. "Hierarchical Dirichlet Gaussian Marked Hawkes Process for Narrative Reconstruction in Continuous Time Domain." Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing. 2018.

EXPERIENCE

Summer Visiting Student, MIT
July 2018 - Oct 2018 Massachusetts, Cambridge, U.S.
Collaborative researcher, MIT Political Science Lab

Internship, Developer, Codigm Corp
Oct 2015 - Jan 2016 Seongnam, Republic of Korea
Front-End/Back-End developer
Homepage: `https://www.goorm.io/`

RESEARCH PROJECTS

Feature Extraction Method on Contextualized Word Embedding Models (2019-Present)
Modeling a novel feature extraction method on contextualized word embedding models [Naver Clova Corp.]

Theoretical Analysis on Compositionlity of Word Embedding Models (2018-2019)
Proving additive compositionality of Skip-Gram; Modeling a novel word embedding model based on our theorem [Naver Clova Corp.]

Document Clustering with Poisson Point Process (2017-2018)
Clustering related New York Times news articles with topic information and publication time information of each article [NCSoft]

TALK	Dec. 14. 2019 "Additive Compositionality of Word Vectors." Naver Clova Corp. Tech Talk Jan. 25. 2019 "Hierarchical Dirichlet Gaussian Marked Hawkes Process for Narrative Reconstruction in Continuous Time Domain." NCSoft. Tech Talk
ACADEMIC SERVICE	Reviewer of ACL 2019 Reviewer of EMNLP 2019 Reviewer of ICLR 2019
TEACHING EXPERIENCE	Machine Learning for Social Science, TA Mar 2019 - Aug 2019 Artificial Intelligence & Machine Learning, TA Mar 2017 - Aug 2017 Data Structure, TA Sep 2016 - Feb 2017, Sep 2017 - Feb 2018, Mar 2018 - Aug 2018, Sep 2018 - Feb 2019
SCHOLARSHIP	Korea National Science& Technology Scholarship (2012-2016)
COMPUTER SKILLS	**Languages**: C, C++, Java, Python, LaTeX **Web Development**: HTML, CSS, JavaScript **Applications**: Vi/Vim, Git, Docker
REFERENCES	Prof. Alice Oh, School of Computing, KAIST, alice.oh@kaist.edu