Seunghyun Yoon

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EDUCATION

Seoul National University, Seoul, Korea

Ph.D. Candidate in Department of Electrical and Computer Engineering

2017 - present

• Advisor: Professor Kyomin Jung

Seoul National University, Seoul, Korea

M.S. in Department of Electrical and Computer Engineering

Feb. 2017

• Advisor: Professor Kyomin Jung

• GPA: 3.92 / 4.3

Handong Global University, Pohang, Korea

B.S. in Electrical and Electronics Engineering, Mechanical Engineering (dual)

Feb. 2006

• GPA: 3.82 / 4.5

RESEARCH INTERESTS

Question Answering (QA) System

- QA pair ranking algorithm
- reading comprehension QA

Dialogue Model

- language adaptation (personalization)
- emotional discourse model (multi-modal)

PROFESSIONAL EXPERIENCES

Researcher

Visiting Researcher at Automation & Systems Research Institute, Seoul, Korea

Mar. 2017 – Aug. 2017

- research ranking model for question-answer pairs
- natural language processing (dialogue model, QA)

Senior Engineer at Samsung Research AI, Seoul, Korea

Feb. 2006 - Mar. 2017

- Artificial Intelligence Team
- question answering system, information retrieval, ranking algorithm
- developing social service platform (front-end, back-end)
- involved in concept-prototyping projects

Facilitator

Representative of employees, Hangajok Council at Samsung, Korea

Jan. 2012 - Jun. 2014

- elected employee representative by direct election
- participated in labor-management consultation council

Trainer of Global New Employee Course at Samsung, Korea

Jan. 2011 - Jul. 2011

• served as a Samsung "global new employee training course" trainer (English)

ACADEMIC **ACTIVITIES**

Teaching Assistant

Programming Methodology, Seoul Nat'l Univ.	Spring 2018
Lab. Sentiment Analysis, BigCamp (Big Data Academy), Big Data Institute	2016-2018
Topics in Computer and VLSI (Machine Learning), Seoul Nat'l Univ.	Fall 2015

Talks

QA-pair ranking algorithm and its applications, Naver Aug. 2018 Advancement of the Neural Dialogue Model, Fast Campus Jul. 2018

PUBLICATIONS

- 1. S Yoon, K Park, J Shin, H Lim, S Won, M Cha, K Jung, "Detecting Incongruity Between News Headline and Body Text via a Deep Hierarchical Encoder," to be appear, AAAI Conference on Artificial Intelligence (AAAI), 2019.
- 2. S Yoon, S Byun, K Jung, "Multimodal Speech Emotion Recognition uing Audio and Text," to be appear, IEEE Workshop on Spoken Language Technology (SLT), 2018.
- 3. Y Lee*, S Yoon*, K Jung, "Comparative Studies of Detecting Abusive Language on Twitter," in Proc. of Empirical Methods in Natural Language Processing (EMNLP) Workshop on Abusive Language Online,
- 4. S Yoon, J Shin, K Jung, "Learning to Rank Question-Answer Pairs using Hierarchical Recurrent Encoder with Latent Topic Clustering," in Proc. of Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2018.
- 5. J Shin, Y Kim, S Yoon, K Jung, "Contextual-CNN: A Novel Architecture Capturing Unified Meaning for Sentence Classification," in Proc. of Big Data and Smart Computing (BigComp), IEEE International Conference on., 2018.
- 6. S Yoon, P Estrada, K Jung, "Synonym Discovery with Etymology-based Word Embeddings," in Porc. of Computational Intelligence (SSCI), IEEE Symposium Series on., 2017.
- 7. S Yoon, H Yun, Y Kim, G Park, K Jung, "Efficient Transfer Learning Schemes for Personalized Language Modeling using Recurrent Neural Network," in Proc. of AAAI Conference on Artificial Intelligence (AAAI) Workshop on Crowdsourcing, Deep Learning and Artificial Intelligence Agents, 2017.
- 8. S Yoon, M Sundar, A Gupta, K Jung, "Automatic Question Answering System for Consumer Products," in Proc. of SAI Intelligent Systems Conference. Springer, Cham, 2016.
- 9. K Park, J Kim, J Park, M Cha, J Nam, S Yoon, E Rhim, "Mining the Minds of Customers from Online Chat Logs," in Proc. of the ACM International on Conference on Information and Knowledge Management (CIKM), 2015.
- 10. S Yoon, E Rhim, D Kim, "Domain Question Answering System," in KIISE Transactions on Computing Practices, 2015.
- 11. S Yoon, K Lee, H Shin, "Media clips: Implementation of an intuitive media linker," in Proc. of Broadband Multimedia Systems and Broadcasting (BMSB), IEEE International Symposium on., 2011.

SKILLS

Excellence in Programming Languages: Java, C++, Python

Fluency in Deep Learning Framework: Tensorflow

Fluency in front-end sever design: Apache Tomcat, Spring Framework, AWS, Linux

Familiarity with back-end sever design: NoSQL

HONORS AND **AWARDS**

5th place / 71 teams, Natl' AI R&D Fake News Challenge, Ministry of Science and ICT, Korea

2015-2016

Scholarship for M.S. degree, Samsunng Electronics

Best Paper Presentation, Korea Computer Congress, 2014

2014

2017

PATENTS

- 1. J Nam, M Lee, M Koo, <u>S Yoon</u>, "Method of recommending application, mobile terminal using the method, and communication system using the method," *issued patent*, US 9,247,376, Jan. 26, 2016
- 2. <u>S Yoon</u>, M Lee, "Method and apparatus for displaying photo on screen having any shape," *issued patent*, *US* 9,049,383, Jun. 2, 2015
- 3. <u>S Yoon</u>, M Lee, M Koo, J Nam, "Method and apparatus for providing information and computer readable storage medium having a program recorded thereon for executing the method," *issued patent*, *US* 8,958,824, Feb. 17, 2015
- 4. <u>S Yoon</u>, S Kim, "Method and apparatus for fast tracking position by using global positioning system," *issued patent*, *US* 8,094,070, Jan. 10, 2012
- 5. E Rhim, J Kim, J Nam, S Yoon, K Park, J Park, M Cha, "Method and device for analyzing users' emotion," *pending patent*, *PCT/KR1020160058782*, May. 13, 2016
- 6. Y Won, <u>S Yoon</u>, O Kwon, M Kim, H Oh, S Lee, S Cha, "User terminal device, information providing system, and method for providing information," *pending patent, US 14/511,506, EP20140185800*, Oct. 10, 2014
- Y Kim, O Kwon, S Kim, H Oh, S Yoon, S Cha, J Lee, "Terminal apparatus, server and method of controlling the same," pending patent, US 14/250,081, CN 201410085759, EP20140154718, Apr. 10, 2014
- 8. <u>S Yoon</u>, M Lee, M Koo, J Nam, "Apparatus and method for searching with consideration user's action," *pending patent, US 13/631,353*, Sep. 28, 2012
- 9. Sayoon, M Lee, M Koo, J Nam, "Apparatus and method for clipping and sharing content at a portable terminal," pending patent, US 13/629,394, CN 201280047213, EP20120837007, PCT/KR1020110097578, Sep. 27, 2012
- 10. <u>S Yoon</u>, "Apparatus and method for correcting position information of portable terminal in multi-path zone," *pending patent, US 13/604,528*, Sep. 5, 2012
- 11. K Kim, J Lee, W Park, H Shim, Y Park, M Lee, M Koo, S Yoon, J Nam, "Method and apparatus for connecting devices," pending patent, US 13/452,766, EP20120162473, PCT/KR1020110037351, Apr. 20, 2012
- 12. <u>S Yoon</u>, S Maeng, J Huh, S Seo, J Kim, J Park, "Method and apparatus for crawling webpages," *pending* patent, US 13/116,785, May. 26, 2011

PATENTS KOREAN

- 1. <u>S Yoon</u>, M Lee, M Koo, J Nam, "Method and apparatus for providing information, and computer readable storage medium," *issued patent, KR 1017731670000*, Aug. 24, 2017
- 2. J Nam, M Lee, M Koo, <u>S Yoon</u>, "Method for recommendation of application, mobile terminal thereof and communication system thereof," *issued patent*, *KR* 1017473030000, Jun. 8, 2017
- 3. <u>S Yoon</u>, S Kim, "Method and apparatus for fast positioning using global positioning system," *issued patent*, *KR* 1015649380000, Oct. 27, 2015
- 4. K Jung, <u>S Yoon</u>, J Shin, H Kwak, S Byun, "Artificial intelligence based dialog system and response control method thereof," *pending patent, KR 1020170158345*, Nov. 24, 2017
- 5. <u>S Yoon</u>, S Lee, O Kwon, M Kim, H Oh, Y Won, S Cha, "Method and apparatus for changing personal information," *pending patent, KR 1020130122222*, Oct. 14, 2013
- 6. <u>S Yoon</u>, J Nam, M Koo, M Lee, "Apparatus and method for collecting information of destination in portable terminal," *pending patent, KR 1020130065793*, Nov. 30, 2011
- 7. J Nam, M Lee, M Koo, <u>S Yoon</u>, "Apparatus and method for setting manner mode in portable terminal," *pending patent, KR 1020110113927*, Nov. 3, 2011