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
- sentence/word embedding

Dialogue Model

- context-consistent response generation
- language adaptation (personalization)
- emotional discourse model

PROFESSIONAL EXPERIENCES

Software Engineer

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

Mar. 2017 – Aug. 2017

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

Senior Engineer at Samsung Software R&D Center, Seoul, Korea

Feb. 2006 - Mar. 2017

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

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
- all the coursework had run in 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**Advancement of the Neural Dialogue Model, **Fast Campus**Jul. 2018

PUBLICATIONS

- 1. <u>S Yoon</u>, J Shin, K Jung, "Learning to Rank Question-Answer Pairs using Hierarchical Recurrent Encoder with Latent Topic Clustering," to be appear, Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2018.
- 2. J Shin, Y Kim, <u>S Yoon</u>, 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.
- 3. <u>S Yoon</u>, P Estrada, K Jung, "Synonym Discovery with Etymology-based Word Embeddings," in Porc. of Computational Intelligence (SSCI), IEEE Symposium Series on., 2017.
- 4. 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 the Thirty-First AAAI Conference on Artificial Intelligence (AAAI) Workshop on Crowdsourcing, Deep Learning and Artificial Intelligence Agents, 2017.
- 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.
- 6. K Park, J Kim, J Park, M Cha, J Nam, <u>S Yoon</u>, 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.
- 7. <u>S Yoon</u>, E Rhim, D Kim, "Domain Question Answering System," in KIISE Transactions on Computing Practices, 2015.
- 8. <u>S Yoon</u>, K Lee, H Shin, "Media clips: Implementation of an intuitive media linker," in *Proc. 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

Scholarship for M.S. degree, Samsunng Electronics

2015-2016

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