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Seoul, South Korea

Jee Seok Yoon

PhD Student @ Korea University

INTERESTS

Representation Learning, Meta Learning, Medical Image Analysis

Current Interests: Disentangled Representation Learning, Image Style Transfer, Few-shot Learning

EDUCATION

Korea University (Coursework: 5th Semester, one more to go) — Seoul, South Korea
Integrated M.S./Ph.D. student in Dept. of Brain and Cognitive Engineering — Sep. 2018 –
Advisor: Professor Heung-Il Suk
GPA: 4.27 / 4.5 (97.4 / 100)

Korea University — Seoul, South Korea
Undergraduate student in Dept. of Computer Science and Engineering — Mar. 2012 – Aug. 2018
GPA: 3.23 / 4.5 (85.5 / 100)

American International School Dhaka — Dhaka, Bangladesh
Middle, High school — Mar. 2007 – Mar. 2010

+8 years in Australia, Bangladesh, Indonesia, Thailand

AWARDS

Student Travel Award — Quebec, Canada
Medical Image Computing and Computer Assisted Intervention Conference (MICCAI, link) — Sep. 2017

Best Paper Award — Jeju Island, South Korea
Korean Institute of Information Scientists and Engineers (KIISE) Korea Computer Congress (KCC, link) — Jun. 2017

Best Undergraduate Student Paper Award — Pyeongchang, South Korea
Korean Institute of Information Scientists and Engineers (KIISE) Winter Conference (Link, code) — Dec. 2016

SELECTED PUBLICATIONS

In order of importance

2 **Jee Seok Yoon***, Wonjun Ko, and Heung-Il Suk, "Plug-in Factorization for Latent Representation Disentanglement," *arXiv*, preprint arXiv:1905.11088 (Paper, code, submitted to IEEE TNNLS (**IF 8.793**))

1 Y. Ahn*, **Jee Seok Yoon***, S. Lee, H.-I. Suk* J. Son, Y. Sung, Y. Lee, B.-K Kang, and H. Kim, "Deep Learning Algorithm for Automated Segmentation and Volume Measurement of the Liver and Spleen Using Portal Venous Phase Computed Tomography Images," *Korean Journal of Radiology*, Vol. 21, No. 8, pp. 987-997, 2020 (IF 3.179, paper)

3 Bum-Chae Kim*, **Jee Seok Yoon***, Jun-Sik Choi, and Heung-Il Suk, "Multi-scale Gradual Integration Convolutional Neural Network for False Positive Reduction in Pulmonary Nodule Detection," *Neural Networks*, Vol. 115, pp. 1-10, 2019. (***IF 7.197***, paper, code)

4 **Jee Seok Yoon***, Wonjun Ko, and Heung-Il Suk, "A Plug-in Factorizer for Disentangling a Latent Representation," Proc. of 1st *ICCV Workshop on Interpreting and Explaining Visual Artificial Intelligence Models*, Seoul, South Korea, 2019 (Poster **Spotlight**, link)

7 **Jee Seok Yoon*,** Eun-Song Kang, and Heung-Il Suk, "Gated Two-Stage Convolutional Neural Network for Ischemic Stroke Lesion Segmentation," Proc. of 3rd *MICCAI Workshop on Ischemic Stroke Lesion Segmentation Challenge (ISLES)*, Quebec, Canada, 2017. (***Student Travel Award***, poster, link)

EXPERIENCE

SK Telecom — Eulji-ro, Seoul, South Korea
Teaching Assistant — Sep. 2017 –
- Taught TensorFlow and PyTorch to employees of SK Group ranging from experts to beginners in the field

Kakao Enterprise (Computer vision team) — Pangyo, Gyeonggi, South Korea
Research Intern — Jun. 2018 – Aug. 2018
- Mainly focused on meta-learning and few-shot learning (produced [2])

Venture Company — Anam, Seoul, South Korea
Co-founder, CTO, Backend Developer — Mar. 2013 – May. 2014
- Developed the backend for a mobile dating service (currently out of business…!)

SKILLS

PROGRAMMING

Daily usage of **TensorFlow** (V1, **V2**), **PyTorch**, Python
6+ months of experience in Android and Java server programming

DATASET FLUENCY

Experience with public and private, large and small size, many and few samples, 1D/2D/3D/4D datasets
E.g. **2D** (ImageNet, CelebA-HQ, …)**, s/fMRI** (BRATS, ISLES, ADNI), **EEG** (Kaggle), **EHR** (PhysioNet)

PROJECTS

CHALLENGE	SEGMENTATION	**9th place** in Ischemic Stroke Lesion Segmentation Challenge 2016 (Official Leaderboard, [7]) **10th place** in Brain Tumor Image Segmentation Challenge 2016 ([8, 9])
	DETECTION	**4th place** in Lung Nodule Analysis 2016 (Official Leaderboard, under the name *MILAB*, [3])
APPLICATIONS	LCD CRACK DETECTION	**Carrot Insurance PhoneCare LCD Insurance** Developed smartphone LCD crack detector (News)
	FIBROSIS DIAGNOSIS	**SmartCarworks Inc. GoCDSS** Fully automated liver, spleen segmentation and liver fibrosis diagnosis system (News, [1])

Participated as the main/1st contributor in the listed projects

PUBLICATIONS

JOURNAL	1	Y. Ahn*, **Jee Seok Yoon***, S. Lee, H.-I. Suk* J. Son, Y. Sung, Y. Lee, B.-K Kang, and H. Kim, "Deep Learning Algorithm for Automated Segmentation and Volume Measurement of the Liver and Spleen Using Portal Venous Phase Computed Tomography Images," *Korean Journal of Radiology*, Vol. 21, No. 8, pp. 987-997, 2020 (IF 3.179, paper)
	2	**Jee Seok Yoon***, Wonjun Ko, and Heung-Il Suk, "Plug-in Factorization for Latent Representation Disentanglement," *arXiv*, preprint arXiv:1905.11088 (Paper, code, submitted to IEEE TNNLS (**IF 8.793**))
	3	Bum-Chae Kim*, **Jee Seok Yoon***, Jun-Sik Choi, and Heung-Il Suk, "Multi-scale Gradual Integration Convolutional Neural Network for False Positive Reduction in Pulmonary Nodule Detection," *Neural Networks*, Vol. 115, pp. 1-10, 2019. (***IF 7.197***, paper, code)
INTERNATIONAL CONFERENCE	4	**Jee Seok Yoon***, Wonjun Ko, and Heung-Il Suk, "A Plug-in Factorizer for Disentangling a Latent Representation," Proc. of 1st *ICCV Workshop on Interpreting and Explaining Visual Artificial Intelligence Models*, Seoul, South Korea, 2019 (Poster **Spotlight**, link)
	5	Wonjun Ko*, **Jee Seok Yoon**, and Heung-Il Suk, "Towards Reducing Calibration in BCI: Artificial EEGs Generation by Deep Learning," Proc. of 7th *International Brain-Computer Interface Meeting*, Pacific Grove, USA, 2018. (***Student Award***, Poster, link, paper)
	6	Wonjun Ko*, **Jee Seok Yoon**, Eun-song Kang, Eunji Jun, Jun-Sik Choi, and Heung-Il Suk, "Deep Recurrent Spatio-Temporal Neural Network for Motor Imagery based BCI," Proc. of 6th *IEEE International Winter Conference on Brain-Computer Interface*, High1 Resort, Korea, 2018. (Poster, paper)
	7	**Jee Seok Yoon*,** Eun-Song Kang, and Heung-Il Suk, "Gated Two-Stage Convolutional Neural Network for Ischemic Stroke Lesion Segmentation," Proc. of 3rd *MICCAI Workshop on Ischemic Stroke Lesion Segmentation Challenge (ISLES)*, Quebec, Canada, 2017. (***Student Travel Award***, poster, paper)
DOMESTIC CONFERENCE	8	**Jee Seok Yoon*** and Heung-Il Suk, "Auto-context Bagging for Brain Tumor Automatic Segmentation," Proc. of 2017 *KIISE Korea Computer Congress (KCC)*, 2017 (***Best Paper Award***, **oral**, link, paper)
	9	**Jee Seok Yoon*** and Heung-Il Suk, "Deep Learning-based Brain Tumor Segmentation from Multi-modal MRI," Proc. of 2016 *KIISE Winter Conference*, 2016 (***Best Paper Award***, poster, link, paper, code)
DOMESTIC PATENT	10	**Jee Seok Yoon** and Heung-Il Suk*, "A Method and Device for Explainable Few-shot Image Classification," Korean Patent, No. 10-2018-0142824, 19 Nov. 2018 (Pending, link)
DOMESTIC ARTICLE	11	**Jee Seok Yoon*** and Heung-Il Suk, "AI-based Computer Vision Uses in Kakao Corp.," Communications of the Korean Institute of Information Scientists and Engineers, Vol. 37, No. 2, pp. 52-55, Feb 2019 (Link)

**First Author(s)*

For those interested, summary in PowerPoint (Korean, ~~English~~)

Thank you for your interest.