

## Research Interest

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- Computer Vision, Natural Language Processing, Language Grounding, Audio-Visual Learning, Self-supervised Learning

## Education

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### Allen Institute for AI

Seattle, USA

POSTDOC (YOUNG INVESTIGATOR)

Mar. 2021 – Current

- Mosaic Team (Advisor: Yejin Choi)

### Seoul National University (SNU)

Seoul, Korea

INTEGRATED MS / PH.D PROGRAM IN COMPUTER SCIENCE AND ENGINEERING

Mar. 2015 – Feb. 2021

- Vision and Learning Lab (Advisor: Gunhee Kim)

### Seoul National University (SNU)

Seoul, Korea

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Mar. 2009 - 2015

- 2010 – 2012, Compulsory Military Service. Served as a sergeant in R.O.K Marine Corp.

## Publications

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### INTERNATIONAL CONFERENCE

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|------|---|-----------------------|
| 2021 | <b>Youngjae Yu</b> , Jiwan Chung, Heeseung Yun, Jongseok Kim, and Gunhee Kim, <i>Transitional Adaptation of Pretrained Models for Visual Storytelling</i>   | CVPR 2021             |
|      | <b>Youngjae Yu</b> , Sangho Lee, Gunhee Kim and Yale Song, <i>Self-Supervised Learning of Compressed Video Representations</i>  | ICLR 2021             |
|      | Sangho Lee, <b>Youngjae Yu</b> , Gunhee Kim, Thomas Breuel, Jan Kautz and Yale Song, <i>Parameter Efficient Multimodal Transformers for Video Representation Learning</i>                                     | ICLR 2021             |
| 2020 | Jongseok Kim, <b>Youngjae Yu</b> , Hoeseong Kim and Gunhee Kim, <i>Dual Compositional Learning for Interactive Image Retrieval</i>  | AAAI 2021             |
|      | <b>Youngjae Yu</b> , Jongseok Kim, Heeseung Yun, Jiwan Chung and Gunhee Kim, <i>Character Grounding and Re-Identification in Story of Videos and Text Descriptions</i>  | ECCV 2020 (Spotlight) |
| 2018 | <b>Youngjae Yu</b> , Jongseok Kim and Gunhee Kim, <i>A Joint Sequence Fusion Model for Video Question Answering and Retrieval</i>   | ECCV 2018             |
|      | Sangho Lee, Jinyoung Sung, <b>Youngjae Yu</b> and Gunhee Kim, <i>A Memory Network Approach for Story-based Temporal Summarization of 360° Videos</i>  | CVPR 2018             |
|      | <b>Youngjae Yu</b> , Sangho Lee, Joonil Na, Jaeyun Kang, Gunhee Kim, <i>A Deep Ranking Model for Spatio-Temporal Highlight Detection from a 360° Video</i>  | AAAI 2018             |
| 2017 | <b>Youngjae Yu</b> , Jongwook Choi, Yeonhwa Kim, Kyoung Yu, Sang-hun Lee, Gunhee Kim, <i>Supervising Neural Attention Models for Video Captioning by Human Gaze Data</i>                                      | CVPR 2017             |
|      | <b>Youngjae Yu</b> , Hyungjin Ko, Jongwook Choi, Gunhee Kim, <i>End-to-end Concept Word Detection for Video Captioning, Retrieval, and Question Answering</i>   | CVPR 2017 (Spotlight) |
|      | Yunseok Jang, Yale Song, <b>Youngjae Yu</b> , Youngjin Kim, Gunhee Kim, <i>TGIF-QA: Toward Spatio-Temporal Reasoning in Visual Question Answering</i>   | CVPR 2017 (Spotlight) |
| 2016 | Inuk Jung, Kyuri Jo, Hyejin Kang, Hongryul Ahn, <b>Youngjae Yu</b> , Sun Kim, <i>TimesVector: A Vectorized Clustering Approach to the Analysis of Time Series Transcriptome Data from Multiple Phenotypes</i> | GIW 2016              |

### JOURNAL

2019 Yunseok Jang, Yale Song, Chris Dongjoo Kim, **Youngjae Yu**, Youngjin Kim, Gunhee Kim, *Video Question Answering with Spatio-Temporal Reasoning* IJCV 2019

2017 Inuk Jung, Kyuri Jo, Hyejin Kang, Hongryul Ahn, **Youngjae Yu**, Sun Kim, *TimesVector: A Vectorized Clustering Approach to the Analysis of Time Series Transcriptome Data from Multiple Phenotypes* Bioinformatics 2017

### WORKSHOP PAPERS

2020 **Youngjae Yu** \*, Jongseok Kim \*, Seunghwan Lee, Gunhee Kim, (\* is equal contribution.), *Cycled Compositional Learning between Images and Text* CVPR 2020 CVFAD

Hankyol Lee, **Youngjae Yu**, Gunhee Kim, *Augmenting Data for Sarcasm Detection with Unlabeled Conversation Context* In ACL 2020, FLP

2019 **Youngjae Yu**, Seunghwan Lee, Yunchchol Choi, Gunhee Kim, *CurlingNet: Compositional Learning between Images and Text for Fashion IQ Data* ICCV 2019 CVFAD

2017 Seil Na, **Youngjae Yu**, Sangho Lee, Jisung Kim, Gunhee Kim, *Encoding Video and Label Priors for Multi-label Video Classification on YouTube-8M dataset* CVPR 2017 & YouTube-8M

2016 **Youngjae Yu**, Hyungjin Ko, Jongwook Choi, Gunhee Kim, *Video Captioning and Retrieval Models with Semantic Attention* ECCV 2016 LSMDC & VisStory

### THESIS

2015 **Youngjae Yu**, Sun Kim, *Correlation Based Feature Selection and Pattern Clustering Method for Time Series Gene Expression Data of Drought Stressed Rice* B.S. Thesis

### IN PREP

AAAI 2022 (Prep) **Youngjae Yu**, Gunhee Kim, *Self-supervised Character Representation Learning for Video Story*

AAAI 2022 (Prep) Jiwan Chung, **Youngjae Yu**, Heeseung Yun, Jongseok Kim, Eunkyu Park, Gunhee Kim, *Who is who?, Character Information as Attention Priors* (An Winning Solution for DramaQA)

## Professional Experience

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2021- Current **Young Investigator**, Allen Institute for AI

2018-2021 **Software Engineer, Research Scientist**, RippleAI

2015-2018 **Graduate Teaching Assistant**, Seoul National University

2018 **Research Intern**, Redmond, Microsoft

2017 **NAVER PhD Fellowship**, Naver

2018 **Lecture Instructor**, Samsung DS Artificial Intelligence course : NLP and Vision

2012-2014 **Undergraduate Research Assistant**, Seoul National University

## Professional Development

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### Academic Activities

#### REVIEWER

- Conference, Journal (CVPR, ECCV, ICCV, ACCV, AAAI, Neurips, ICLR, ICMI, MM, TCSVT)
- Workshop (LUV (2019))

### Other Skills

#### PROGRAMMING

- Programming Languages. Python, R, C/C++, Java, Shell scripts (bash, zsh), Matlab, Ocaml
- ML/DL Frameworks. TensorFlow, PyTorch, Caffe
- Operating Systems. Linux (Ubuntu), macOS, Windows
- Other Tools and Skills. Git, Latex, Vim

## Honors & Awards

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2021	<b>Award</b> , College of Engineering, Best Thesis Award	<i>SNU, College of Engineering</i>
2021	<b>Award</b> , BK Excellent Researcher Award	<i>SNU</i>
2021	<b>Award</b> , The Best Doctoral Dissertation Award	<i>SNU CSE</i>
2020	<b>130K \$ investment</b> , Leader of RippleAI Team, AI Challenge-NIPA	<i>Seoul, Korea</i>
2020	<b>1st prize</b> , DramaQA Challenge	<i>ECCV 2020</i>
2020	<b>1st prize</b> , Fashion IQ 2020 Challenge	<i>CVPR 2020</i>
2020	<b>1st prize</b> , Sarcasm detection shared task - The Second Workshop on Figurative Language Processing	<i>ACL 2020</i>
2019	<b>2nd prize</b> , Fashion IQ 2019 Challenge	<i>ICCV 2019</i>
2019	<b>1st prize</b> , Large Scale Movie Description and Understanding Challenge (LSMDC 2019)	<i>ICCV 2019 CLVL</i>
2017	<b>Fellowship</b> , NAVER PhD Fellowship award	<i>NAVER</i>
2018	<b>Google Travel Grants</b> , Grant recipient for attending ECCV 2018 (Munich, Germany)	<i>Google</i>
2018	<b>Kakao Travel Grants</b> , Grant recipient for attending ICLR 2018 (Vancouver, Canada)	<i>Kakao</i>
2017	<b>1st prize</b> , Movie Annotation and Retrieval track, Movie Fill-in-the-Blank track - Large Scale Movie Description and Understanding Challenge (LSMDC 2017)	<i>ICCV 2017 LSMDC &amp; MovieQA</i>
2016	<b>1st prize</b> , Movie Annotation and Retrieval track, Movie Fill-in-the-Blank track - Large Scale Movie Description and Understanding Challenge (LSMDC 2016)	<i>ECCV 2016 LSMDC &amp; VisStory</i>

## Teaching Experience

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2019	<b>Mentoring</b> , Multimodal Learning for Videos	<i>RippleAI</i>
2018	<b>Teaching Assistant</b> , Samsung DS <sup>2</sup> Artificial Intelligence course : NLP and Vision	<i>SNU</i>
2017	<b>Workshop Instructor</b> , Resource development : Theory and Application of Deep Learning	<i>SNU</i>
2017	<b>Lecture Instructor</b> , Seoul Big Data Academy : Tensorflow basic, CNN, RNN	<i>SNU</i>
2017	<b>Lecture Instructor</b> , SKT Academy : Tensorflow basic, Introduction to CNN,RNN	<i>SNU</i>
2017	<b>Teaching Assistant</b> , Big Data Academy : Introduction to RNN	<i>SNU</i>
2016	<b>Teaching Assistant</b> , 4190.773 : Probabilistic Graphical Model	<i>SNU</i>
2015	<b>Teaching Assistant</b> , 4190.307 : Operating System	<i>SNU</i>
2015	<b>Teaching Assistant</b> , M1522.001000 : Computer Vision	<i>SNU</i>