Kim Jisoo

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Website | GitHub | LinkedIn

Research Interests

Deep Learning based Computer Vision and Multi-modal Learning, including:

Machine perception understanding, text-guided generative Model, text-guided augmentation.

Education

Ewha Womans University Mar. 2018 – Aug. 2022
Bachelor of Computer Science *Seoul, Korea*

- CGPA: 3.69/4.0, Major GPA: 3.78/4.0, *Magna Cum Laude*
- Academic Excellence Scholarship (upper 15% in enrollment, full-tuition support)

Research Experience

Algorithmic Machine Intelligence Lab: POSTECH Jul. 2022 - Present
External Research Participant (Advisor : Prof. TaeHyun Oh) *Pohang, Korea*

- Research on Text-guided generation and augmentation, 'Text-guided manifold augmentation' paper submitted for CVPR 2023.

NuviLab, Inc. Jan. 2022 – Jun. 2022
AI Software Engineer Intern *Seoul, Korea*

- Developed a zero-shot food classification model leveraging CLIP, to classify 2,000+ food categories.
- Managed over 140k images and built multi-conditioned validation set sampling API.

Computer Vision Lab: POSTECH May 2021 – Sep. 2021
Undergraduate Research Intern (Advisor : Prof. Jaesik Park) *Pohang, Korea*

- Research on Generative Model
- Implemented 'Repurposing GANs for One-shot Semantic Part Segmentation' in PyTorch [Github].

Publications

(*Equal contribution are denoted by "*".*)

[1] M. Ye-Bin, **Kim Jisoo***, Hong-Yeob, T.-H. Oh "Pre print?? what Text-guided manifold augmentation" *CVPR*, 2023. *(Accept. rate Idonno%)*

[2] K. Da-yeon*, **Kim Jisoo***, C. Ki-Jun "Grape Grade Discrimination System using Step-by-Step Deep Learning Model and Drone Path Planning Algorithm", *Korean Institute of Information Scientists and Engineers: KIISE*, 2021.

Projects

GGDS: Grape Grade Discrimination System Sep. 2021 – Jun. 2022
Project Leader, AI Engineer *Seoul, Korea*

- Built intelligence system for large-scale grape farms; consisting drone autonomous driving, detection, tracking, segmentation [Github]
- Consolidated a regression model to estimate total number of berries including occluded ones from a monocular image.

AWS CIC Challenge Nov. 2021 – May 2022
AI Software Researcher & Engineer *Seoul, Korea*

- Constructed a leaf segmentation system and calculated the leaf area to construct the first and only DB for perilla leaf; applied them to local farms in Geumnsan, Korea.

Naver AI BoostCamp Jul. 2021 – Dec. 2021
AI Engineer *Seoul, Korea*

- Implemented custom CutMix tool and improved performance by 3% for trash semantic segmentation model
- Developed Pet Diary using Multimodal Model CLIP; Generated diary text by classifying emotion, situation, and action from pet photos.

Junction X Seoul AI Hackathon May 2021
AI Software Engineer *Seoul, Korea*

- Segmented major facilities (i.e. building, road) from satellite images and adapted clustering algorithms to establish a location proposal model for fire stations. [Github]

Awards & Honors

Gold Prize, Graduation Project Competition, Ewha Womans University / May. 2022
2nd Place, Smart Farm AI Challenge, Ministry of Agriculture, Food, and Rural Affairs, Korean Gov. / Mar. 2022
Best Poster Award, Graduation Project Competition, Ewha Womans University / Nov. 2021
2nd Place, SW Startup Competition, Ewha Womans University / Nov. 2021
2nd Place, JunctionXSeoul AI Hackathon, Junction Korea / May 2021
Dean's List 2020 – 2021(annual), every eligible quarter

Extra

Programming Skills

Proficient: Python, PyTorch, Git, SQL

Familiar: Linux, C/C++

Teaching Experience

Mentor for Udacity Nanodegree for AI programming and code reviews with Python