JUEUN MUN

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CURRENT INTEREST

Object detection and tracking, Motion planning, Domain adaptation, Reinforcement learning

EDUCATION

Kyunghee Universitiy   Yongin-si, South Korea
Undergraduate Student - Full-tuition Merit-based Scholarships   03, 2019 – 08, 2023 (EXPECTED)
Bachelor of Science in Computer Science and Engineering
Overall GPA : 3.75/4.3 (4.04/4.5)   Major GPA : 3.783/4.3   Upper GPA : 4.257/4.3

RESEARCH EXPERIENCE

Perception and Computer Vision Laboratory, Kyunghee University   Yongin-si, South Korea
Advisor: Prof. Seungkyu Lee   09, 2021 – PRESENT
Research title: 3D detection and reconstruction using NeRF

- Adopting NeRF in object detection and reconstruction

Purdue Visiting Scholar, Purdue University - *Full-funded by Korean government* Indiana, United State
Advisor: Prof. Eric Matson, Prof. Tony Smith   04, 2022 – 08, 2022
Research title: Outdoor visual SLAM and Path Planning for Mobile-Robot

- Mobile robots require a customized method to cover the variety of their trajectory, especially outdoors
- For SLAM, incorporating a GPS data to obtain more meaningful keyframes and enhanced the accuracy of the co-visibility graph
- For Path Planning, creating a new cost function which is focusing on the distance of the path and the stability of the path

Machine Learning And Visual Computing Laboratory, Kyunghee University   Yongin-si, South Korea
Advisor: Prof. Sungho Bae   07, 2021 – 08, 2021
Research title: GaussianMix: Rethinking Receptive Field for Data Augmentation

- To existing deep-learning models, centered-positioned pixels would be more influence on the output
- Based on this, proposing a stochastic sampling for mixing regions using a Gaussian distribution

PUBLICATIONS

Preprinted
1. **J. Mun**, Y. Lee, A. F. M. S. Uddin, and S.-H. Bae, "GaussianMix: Rethinking Receptive Field for Data Augmentation.", *Submitted in IEEE Access*
2. S. Heo, **J. Mun**, J. Choi, J. Park, and E. T. Matson, "Outdoor visual SLAM and Path Planning for Mobile-Robot.", *Accepted in CHARMS 2022*

HONORS AND AWARDS

2022 Representative student in Department of Computer Science and Engineering	FALL 2022
2022 Kyunghee University SW festival second prize (Project presentation competition)	FALL 2022
2022 Kyunghee University Hackathon excellence award	FALL 2022
2021 Kyunghee University Hackathon excellence award	FALL 2021
SW Excellence Experience Scholarship, Kyunghee University	FALL 2020 - FALL 2021, FALL 2022

Volunteer Scholarship, Kyunghee University   FALL 2019 - FALL 2021
Full-tuition Merit-based Scholarships, Kyunghee University   2019

UNDERGRADUATE TEACHING ASSISTANT

Data Structures   2021

EXTRA CURRICULAR ACTIVITIES

Computer Science Academic Club, "T.G.wing"   03, 2019 - PRESENT
- Studying computer science and engineering
- Having a weekly Deep learning study meeting and giving a presentation

2022 Korea SW Festival   12, 2022
- Participated as a school representative
- Presented the project, "Controlling the 3D character with hand tracking and emotion recognition using RGB camera", in front of 44 universities and ministers in Korea.

Software Volunteer Club   03, 2019 - 12, 2021
- Teaching coding to elementary school students to provide quality education

ADDITIONAL RELEVANT PROJECT

Gallery application project
- Coursework project of the Data Structure class
- Making a gallery that can store photos or videos with related people, dates, locations, and Liked information

Virtual puppet controlling by Hand Tracking, Gesture Recognition, and Emotion Recognition
- Controlling 3D virtual puppet by the user's hand skeleton, gesture and emotion using the single camera
- Accepted in KSC 2022 conference

Fire detection using Deep leaning
- Fine-tuning the model to improve the accuracy
- Using Quantization method to compress the model

LEADERSHIP ACTIVITIES

President of Software Volunteer Club   2021 - 02, 2022
Vice president of Club 'T.G.wing', a Computer Academic Club   2020

TECHNICAL SKILLS

Advanced Python, C++, C, Git, Pytorch, TensorFlow, OpenCV
Moderate C#, Javascript, Matlab, LaTeX, Unity, ROS, OpenGL
Novice SQL, Java, Hadoop, Javascript

LANGUAGE

Fluent in **English**, Native in **Korean**