Byeongju Woo

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EDUCATION

Pohang University of Science and Technology (POSTECH)   Mar 2019-Feb 2023
B.S. in Computer Science and Engineering
Summa Cum Laude

PUBLICATIONS

1. **Textual Query-Driven Mask Transformer for Domain Generalized Segmentation** [paper]
   Byeongju Woo*, Byeonghyun Pak*, Sunghwan Kim*, Dae-hwan Kim, Hoseong Kim
   European Conference on Computer Vision (**ECCV**), 2024

2. **Human Pose Estimation in Extremely Low-light Conditions** [paper]
   Sohyun Lee*, Jaesung Rim*, Boseung Jeong, Geonu Kim, ByungJu Woo, Haechan Lee, Sunghyun Cho, Suha Kwak
   IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023

EXPERIENCE

Agency for Defense Development (ADD)   Jun 2023-Present
Machine Learning Engineer   *Daejeon, Republic of Korea*

- Selected as one of the 20 officers in Korea dedicated to science and technology research for national defense.
- Developed various defense systems (e.g., UAVs) integrated with ML-based vision models.
- Focused on research in synthetic-to-real generalization for defense applications.

POSTECH Machine Learning Lab   Sep 2022-Dec 2022
Undergraduate Research Intern   *Pohang, Republic of Korea*

- Supervised by Prof. Sungsoo Ahn
- Studied Topological Neural Networks for molecular representation on combinatorial complexes.

Bagelcode   Jun 2022-Sep 2022
Data Scientist   *Seoul, Republic of Korea*

- Conducted big data analysis of customer behavior to enhance the recommendation system in mobile games.

POSTECH Computer Vision Lab   Dec 2021-May 2022
Undergraduate Research Intern   *Pohang, Republic of Korea*

- Supervised by Prof. Suha Kwak
- Studied Human Pose Estimation in Extremely Low-Light Conditions (CVPR'23).

SK Hynix   Jun 2021-Jul 2021
Machine Learning Engineer   *Icheon, Republic of Korea*

- Developed an automated algorithm to pre-check for rejects in 3D NAND Flash manufacturing with DL models.

HONORS & AWARDS

Director's Award, Agency for Defense Development (ADD)   Dec 2022
- Selected as the 2nd place among 8 national defense research projects.

Excellence Research Award, POSTECH   Jun 2022
- Selected as the 2nd place among 72 undergraduate CSE research projects.

Minister's Award, Ministry of Science and ICT   Dec 2021
- Selected as the 1st place among 6 national defense research projects.

SCHOLARSHIPS

Korea National Scholarship of Excellence in Science and Technology   Mar 2021-Feb 2023

- Awarded a total of $15,700 (Full-Ride) for ROND Candidates.

SK Hynix Industry-Academia Scholarship   Sep 2021-Feb 2023
- Awarded a total of $13,300 (Stipend) for industry-academia students

Global Leadership Program Scholarship, POSTECH   Sep 2020-Dec 2021
- Awarded a total of $4,500 (Stipend) for outstanding academic achievement in CSE

Jigok Tuition Scholarship, POSTECH   Mar 2019-Feb 2021
- Awarded a total of $8,300 (Full-Tuition) in merit-based scholarship.

SELECTED COURSEWORK

Computer Science and Engineering

Artificial Intelligence, Machine Learning, Optimization for Machine Learning, Algorithms, Computer Architecture, Operating Systems, Digital System Design, Software Design Methods

Supplementary Coursework

Probability & Statistics, Linear Algebra, Psychology of Perception, Operations Research, R Programming

SKILLS

Programming Languages: Python, C/C++, Java, R, MySQL

Frameworks & Tools: Pytorch, Tensorflow, NumPy, Pandas, OpenCV, Docker, Git

Certificate: Engineer Big Data Analysis (Date of Acquisition: Oct. 2023)

REFERENCES

Dr. Hoseong Kim, Senior Researcher at ADD
Email: hoseongkim@add.re.kr