JOONHYEON BAE

outerskyb@gmail.com
010-4038-7092

EDUCATION

Kumoh National Institute of Technology – Gumi, Korea
Bachelor of Science in Computer Engineering   **Aug 2022**
- GPA: 4.25 (4/116, percentile 96.5)

EXPERIENCE

CVPR Lab.   **Apr 2017 - Present**
Undergraduate Research Intern
- Participated in the researches and Industry-University cooperated projects

LANGUAGE

Korean – Native
English – have no trouble in read and write papers
- TOEIC (score : 900)
- TEPS (score : 368)

SKILLS

Programming Languages
- C, C++
- Python
- JAVA
- JaveScript

Frameworks & Libraries
- Vision related : OpenCV (both C++ and Python), Numpy, PyTorch
- GUI : MFC, Qt, Win32, React.js
- Server : Express.js
- Mobile : Android(JAVA)

PUBLICATION

Joonhyeon Bae, Taeho Kim, Wongee Hong, Jaepil Ko. (2022). "Comparing of Speech Enhancement Performance of Deep Learning Models by Noise Strength". In Proceedings of the 17th IeMeK Symposium on Embedded Technology (ISET2022)

Sangsu Ryu, **Joonhyeon Bae**, Wongi Hong, Jaepil Ko. (2021). "Toy Car Recognition System for Smart Toys". In Proceedings of the 16th IeMeK Symposium on Embedded Technology (ISET2021)

Minhye Kang, **Joonhyeon Bae**, Sujin Lee, Yeonseo Choi, Wongee Hong, Jaepil Ko. (2021). "Multi-Part Presence Verification System Using USB Camera". in Proceedings of the 대한 임베디드 공학회 추계학술대회

Joonhyeon Bae, Wonkee Hong, Jaepil Ko. (2021). "Code Embedding and Detection for Camera Identifiable Photos". in Journal of Advanced Navigation Technology, 25(2), 156–161.

Junhyun Bae, Sangsoo Ryu, Kyungjung Kim, Hyenoyeong Choi, Jaepil Ko. (2017). "Multi-Phase Microstructure Image Classification". in Proceedings of the Korea Software Conference. KIISE.

PROJECTS

Steel Microstructure Segmentation in Microscope image   **Apr 2017 – Aug 2017**
- Non-deep-learning project
- I mainly contributed to implementation and experiment. But I also contributed project's approach
- The Result is published as paper 'Multi-Phase Microstructure Image Classification' which I aforementioned

Invisible Code Inserting in Magnitude of Fourier Transform   **Jun 2018 – Sep 2020**
- The project was Suspended between May 2019 to Apr 2020 because of my Military duty
- I solely participate in this project
- I invented a memory and time effective algorithm for code recognition process in this project
- Whole Experiments was done by me. I execute ① inserting code in image, ② printing coded inserted image, ③ run code detection program with images of ②
- The Result of this project is published as the paper 'Code Embedding and Detection for Camera Identifiable Photos'

Porting Image Style Transfer Models on Mobile Devices   **Mar 2021 – Apr 2021**
- Porting PyTorch Implemented style transfer model on android devices

Car-Plate Number Recognition for mobile devices   **Mar 2021 – Sep 2021**
- porting a lightweight number recognition deep learning model to Android devices
- I contributed to processing flow and implementation

Speech Enhancement   **Apr 2022 – Present**
- I solely participate in this project
- Read over 20+ recently published related papers for this project
- I found a methods for improving previous studies and achieve quite better results than former SOTA
- Scored SOTA score among Time domain models in VoiceBank+DEMAND dataset. And 2nd high Score among whole models (in whole domain)
- Experiment is now done. I'm writing a paper for submit for ICASSP2023(International Conference on Acoustics, Speech, & Signal Processing)

Steel Microstructure Segmentation in Scanning Electron Microscope image   **Sep 2022 – Present**
- I mainly contributed to implementation and experiment. But I also contributed project's approach.
- The Result was published in domestic conference (2022 대한금속·재료학회)

*This CV is written in oct, 2022