HYUNMIN CHO

010-3242-2839 • cho.hyun@icloud.com • linkedin.com/in/chohyunmin/ • github.com/Hyunmin-jasper-Cho

SUMMARY

I am interested in signal processing and its applications, with a particular emphasis on Implicit Neural Representation. And also intrigued by various compression strategies and advanced image processing techniques such as SR and de-noising. My ongoing aim is to explore and innovate within these areas to discover new solutions.

EDUCATION

B.S., AI Software Graduating *exp* Feb 2024
Gachon University, Gyeonggi-do, Korea
Academic Scholarship in *20.Q1, 21.Q1, 21.Q2, 22.Q1* 4.31 GPA | 5/122 ranks

Relevant coursework: Deep Learning, Machine learning, Computer Vision, Data structures, Algorithm, Computer Architecture, Operating System, Probability and Statistics, Software Mathmatics, Computer Graphics, Computer Networks, Database Systems, HCI

TECHNICAL SKILLS

Programming Language: Python(PyTorch, wandb, tensorboard), C++, JAVA
Programming Tools: VSCode, LaTeX, nohup, VIM, SSH
Language Certifications: New TEPS 370

RESEARCH EXPERIENCE

DGIST, Undergraduate Research Intern: Dec 2022 – Feb 2023 (extended)

- Implemented an Implicit Neural Representation (INR) that *can represent a ground-truth image* for laying the groundwork for the de-noising project led by the mentor.
- Research on image compression by merging Meta-Transformer with the developed INR model, aiming to achieve efficient and high-quality image storage and transmission through enhanced generalisability.

Gachon University, Undergraduate Research Intern: Dec 2021 - Nov 2022

- Developed a complete workflow for video coding that includes downsampling with Lanczos filter, VVC encoding-decoding, and upsampling with the ESPCN super-resolution model using C++.
  **CVPRW CLIC Workshop 2022 Proceedings*
- Research about transplanting the model's input/output channel to handle YUV with PyTorch.

ACADEMIC PROJECT

Computer Vision Term Project: Stereo Vision Transfer Learning 2023 Spring
Applied transfer learning to the UniMatch model using a driving stereo dataset to better adapt to inclement weather

- Developed a full-stack data-wrapper and corresponding train/test loop for a new dataset
- Utilising Notion, meticulously curated a compendium of all project elements, ensuring efficient access and understanding of information.

INDIVIDUAL RESEARCH PROJECT

Inpainting with INR by estimating phasor 2023 Spring
By estimating a signal's phasor, implement a solution for lost pixel estimation, trying to lead improvements in image reconstruction quality.

PUBLICATION

CVPRW CLIC2022 Workshop Proceedings (Hyunmin Cho, Kiho Choi) Dec 2021 - Mar 2022
Super-Resolution based Video Coding Scheme

- Proceedings of IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, 2022.
- DOI: 10.1109/CVPRW56347.2022.00190