# Hah Min Lew

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# Career Objective

My interest is to solve data-driven valuable real-world problems through AI / ML systems, currently based on computer vision and ML engineering. I'm a curious and challenging spirit, and proactively seeking opportunities to grow and share my knowledge. For more details, click here.

# EXPERIENCE

Klleon Aug. 2022 - present

AI Researcher, ML model engineering for image and video synthesis through generative modeling using implicit, score-based, and 3D-aware methods. Worked on Chroma-HS by employing Vision Transformer (ViT).

#### MBIS Lab, Advisor: Jae Youn Hwang

Mar. 2019 - Aug. 2022

Graduate Researcher, 6 SCIE publications, 7 international conferences, 9 projects, 6 patents, and 2 awards.

| Highlights: Teaching coding and medical image analysis using CNN to high school students for 10 months. Collaborative research experiences with medical doctors from SNUH, SNUDH, Severance, etc. 3D Physical computing for real-world interactable design in medical applications.

**LANTERN** Nov. 2016 - July 2017

Co-founder, Founded a data-driven customized tutor matching service company. Co-working with Class101.

# Selected Projects

#### Development of a state-of-the-art ML-based head swapping pipeline

Dec. 2022 - June 2023

Full cycle experience from the problem statement, data preprocessing and construction, ML model design, training and evaluation, result serving and improvement. | Achievements: Core-contributed to raise a \$4.5m series A round. | Used skills: Python, PyTorch

#### Building a core production-level head swapping framework

Oct.2022 - Dec.2022

Implementing and reproducing baseline from scratch that has no code. Design optimal solutions to achieve performance at product-applicable levels. | Used skills: Python, PyTorch

#### EDUCATION

Mar. 2019 - Aug. 2021 M.S. in Electrical Engineering & Computer Science at **DGIST** (GPA: 4.06/4.3)

Mar. 2014 - Feb. 2019 Bachelor of Engineering at **DGIST** 

(Best Project Award)

# Selected Publications

Hah Min Lew, et al., "Towards High-Fidelity Head Swapping with Chroma Keying", In Submission Soon.

K. Lee, Hah Min Lew, et al., "CSS-Net: Classification and Substitution for Segmentation of Rotator Cuff Tear", In ACCV 2022.

M. H. Lee, Hah Min Lew, et al., "Deep learning-based framework for fast and accurate acoustic hologram generation", IEEE TUFFC (IF: 3.267, Frontal Cover Paper), 2022.

T. C. Cavalcanti, Hah Min Lew, et al, "Intelligent Smartphone-based Multimode Imaging Otoscope for the Mobile Diagnosis of Otitis Media", Biomedical Optics Express (IF: 3.562, Spotlight on Optics), 2021.

 $\textbf{Hah Min Lew}, et al., \\ \textbf{``Ultrasonic Blood Flowmeter with a Novel Xero Algorithm for a Mechanical Circulatory Support System"}, \\ \textbf{Ultrasonics (IF: } 4.062), 2021.$ 

J. Kim, Hah Min Lew, et al., "Forward-looking Multimodal Endoscopic System based on Optical Multispectral and High-frequency Ultrasound Imaging techniques for Tumor Detection", IEEE TMI (IF: 11.037), 2020.

# SKILLS

Programming Python, PyTorch, TensorFlow Fusion 360 | Docker, Git

Languages Korean (native), English (professional working proficiency)