

HyunJae Lee

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I am a full-stack machine learning engineer with extensive experience in both research and engineering. My research has consistently focused on solving real-world problems, which has resulted in multiple publications at top-tier conferences. I have established and expanded an MLOps team from scratch to six members, and I led the design and implementation of both a large-scale ML training platform and an automated AI model development framework. I was responsible for the full system design and the initial development, handling backend, frontend, and DevOps all at once. I am passionate about solving real-world problems by bridging the gap between ML research and engineering.

EXPERIENCE

Lunit Inc.

Seoul, South Korea

Research Engineer / AutoML Team Leader

July 2021 – Present

- Established and scaled the team to six members focused on automation and efficiency in ML model development.
- Architected and implemented a large-scale, cost-efficient ML platform, leveraging over 1000 GPUs for simultaneous training at a cost reduction of more than 50%. This platform supports nearly 100,000 experiments annually.
- Designed and developed an automated AI model development framework that streamlines the repetitive aspects of AI model creation, enhancing efficiency and consistency.
- Advanced research in Bayesian optimization and pruning algorithms for hyperparameter optimization, resulting in publications and direct integration into our operational framework.

Research Scientist / 3D Mammography Team Leader

March 2018 – July 2021

- Conducted research that addresses the domain gap in both internal and external datasets, significantly enhancing model performance and robustness, leading to publications in top-tier conferences and practical application.
- Developed a 3D Mammography cancer detection AI model that received FDA 510(k) clearance.
- Built a complete pipeline from scratch, including data preprocessing, model development and model deployment.

ConvIoT

Seoul, South Korea

Lead Developer / CEO

June 2016 – July 2017

- Developed and launched a user-friendly IoT platform enabling simple workflow configuration via a web interface.
- Integrated a wide range of internet services and IoT devices from diverse vendors, enabling seamless and automated interactions across systems, and secured early investment from Naver.

SELECTED PUBLICATION (600+ CITATIONS)

Bayesian Optimization Meets Self-Distillation

ICCV 2023

HyunJae Lee, Heon Song*, Hyeonsoo Lee*, Gi-hyeon Lee, Suyeong Park, Donggeun Yoo*

Reducing Domain Gap by Reducing Style Bias

CVPR 2021 (Oral)

HyunJae Lee, Hyeonseob Nam*, Jongchan Park, Donggeun Yoo*

SRM: A Style-Based Recalibration Module for Convolutional Neural Networks

ICCV 2019

HyunJae Lee, Hyo-Eun Kim, Hyeonseob Nam

EDUCATION

M.S | Seoul National University | Computer Science and Engineering

Mar. 2016 - Feb. 2018

B.S | Seoul National University | Computer Science and Engineering

Mar. 2012 - Feb. 2016

HONORS & AWARDS

1st place in Visual Domain Adaptation Challenge

ICCV 2019

2nd place in Embedded Deep Learning Design Challenge

ESWeek 2017

Best Start-up Award

Naver Demo Day 2017

TECHNICAL SKILLS

ML & MLOps: Pytorch, Scikit-learn, Optuna, Vertex AI, MLflow, Kubeflow

Backend Development: Django, DRF, FastAPI, Gin, Celery, Firebase, MySQL, PostgreSQL, Redis, Kafka

DevOps & Infra.: Kubernetes, Docker, Terraform, ArgoCD, GitHub Actions, Prometheus, Grafana, Loki, GCP, AWS

Frontend Development: React, Next.js, MobX, Vercel, Material UI, Tailwind CSS, Shadcn

Languages: English (fluent), Korean (native)