Lunit

AI Research Team @Lunit

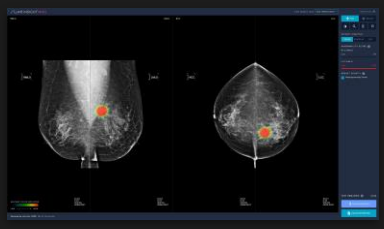
Conquer Cancer with AI

Lunit's AI will increase the survival rate of cancer patients.

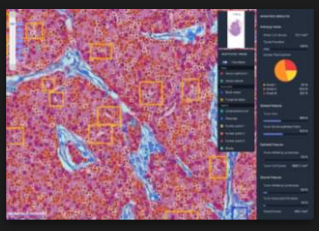
No hype.

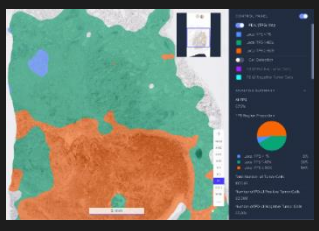
Our already accurate AI is becoming even more accurate with super-talented researchers and very large-scale data.

Cancer Screening

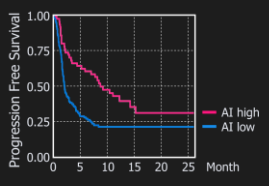


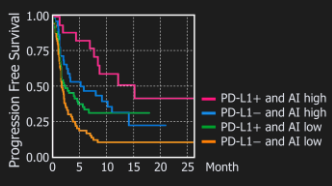
Cancer Treatment





Increase Survival





Lunit is a medical AI company devoted to developing AI models for precision diagnostics and therapeutics in cancer. Founded in 2013, Lunit has been internationally acknowledged for its advanced, state-of-the-art technology and its application in medical images. Our technology has been recognized at international AI competitions surpassing top companies like Google, IBM, and Microsoft.8

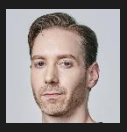
A Small, but Strong Team

Research Division

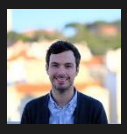
AI Research Team	Research Scientist:	18
	Research Engineer:	Started to hire
AI Platform Team	Research Engineer:	9
	Backend Engineer:	5
	Frontend Engineer:	5
IP Team	Patent Attorney:	2

Leaders in AI Research Team

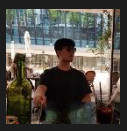
Donggeun Yoo, Co-founder & Chief of Research
Research Area: Computer Vision, Medical Image Analysis
Google Scholar: https://scholar.google.co.kr/citations?user=10f-fEYAAAAJ&hl
Homepage: https://dgyoo.github.io/



Thijs Kooi, VP of Research (Radiology Group)
Research Area: Medical Image Analysis, Computer Vision
Google Scholar: https://scholar.google.com/citations?user=_ofw7R4AAAAJ&hl
Homepage: https://www.thijskooi.com/



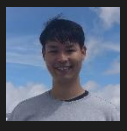
Sergio Pereira, VP of Research (Oncology Group)
Research Area: Medical Image Analysis, Computer Vision
Google Scholar: https://scholar.google.com/citations?user=ZKX0t4YAAAAJ&hl



Hyeonseob Nam, Team Lead (Radiology Group)
Research Area: Computer Vision, Medical Image Analysis
Google Scholar: https://scholar.google.com/citations?user=X9BkR3MAAAAJ&hl
Homepage: https://hyeonseobnam.github.io/

Jongchan Park, Team Lead (Radiology Group)
Research Area: Computer Vision, Medical Image Analysis
Google Scholar: https://scholar.google.co.kr/citations?user=jxJw3_oAAAAJ&hl=en
Homepage: https://sites.google.com/view/jongchanpark

Hyunjae Lee, Team Lead (Radiology Group)
Research Area: Computer Vision, Medical Image Analysis
Google Scholar: https://scholar.google.co.kr/citations?user=m2mp1A8AAAAJ&hl



Seonwook Park, Team Lead (Oncology Group)
Research Area: Computer Vision, Medical Image Analysis
Google Scholar: https://scholar.google.co.kr/citations?user=7vrLPjIAAAAJ&hl
Homepage: https://ait.ethz.ch/people/spark/

Technical Achievements

AI Challenges & Academic Activities

Organizing a medical AI Workshop (Visual Recognition for Medical Images) in conjunction with ICCV 2019.
Ranked 1st place at VisDA Challenge, TASK-CV Workshop, ICCV 2019.
Ranked 2nd place at ACDC@LungHP Challenge, ISBI 2019.
Ranked 1st place at CAMELYON Grand Challenge (post-reopening), ISBI 2017.
Ranked 1st place at Tumor Proliferation Assessment Challenge, MICCAI 2016.
Ranked 5th place at ILSVRC, ILSVRC-COCO Joint Workshop, ICCV 2015.
Ranked 7th place at ILSVRC, ILSVRC Workshop, ECCV 2014.

Publications in the AI field

Venue	Title	First authored	Co-authored	Citation
CVPR Workshop 2015	Multi-scale Pyramid Pooling for Deep Convolutional Representation	O	O	127
ICCV 2015	Attentionnet: Aggregating Weak Directions for Accurate Object Detection	O	O	120
ECCV 2016	Pixel-Level Domain Transfer	O	O	271
MICCAI 2016	Self-Transfer Learning for Fully Weakly Supervised Object Localization	O	O	30
ICLR Workshop 2017	Transferring Knowledge To Smaller Network With Class-Distance Loss	O	O	13
MICCAI Workshop 2017	A Unified Framework For Tumor Proliferation Score Prediction In Breast Histopathology	O	O	54
MICCAI Workshop 2017	Accurate Lung Segmentation Via Network-Wise Training Of Convolutional Networks	O	O	26
ICCV 2017	Two-Phase Learning for Weakly Supervised Object Localization		O	93
NeurIPS 2018	Batch-Instance Normalization for Adaptively Style-Invariant Neural Networks	O	O	75
MICCAI 2018	Keep and Learn: Continual Learning by Constraining the Latent Space for Knowledge Preservation in Neural Networks	O	O	17
MICCAI 2018	A Robust and Effective Approach Towards Accurate Metastasis Detection and Pn-Stage Classification in Breast Cancer	O	O	22
CVPR 2018	Distort-And-Recover: Color Enhancement Using Deep Reinforcement Learning	O	O	83
BMVC 2018	Bam: Bottleneck Attention Module	O		206
ECCV 2018	Convolutional Block Attention Module	O		1,939
CVPR 2019	Learning Loss for Active Learning	O		103
MICCAI 2019	PseudoEdgeNet: Nuclei Segmentation only with Point Annotations	O	O	15
ICCV Workshop 2019	Photometric Transformer Networks and Label Adjustment for Breast Density Prediction	O	O	4
ICCV 2019	SRM: A Style-based Recalibration Module for Convolutional Neural Networks	O	O	22
ECCV 2020	Learning Visual Context by Comparison	O	O	2
CVPR 2021	Reducing Domain Gap by Reducing Style Bias	O	O	-
CVPR 2021	Weakly-Supervised Physically Unconstrained Gaze Estimation		O	-
CVPR 2021	Polygonal Point Set Tracking	O		-

Research Scientist

Roles & Responsibilities

- Research and develop deep learning models for diagnostic AI and new medical discoveries
- Perform challenging and creative research in a flexible, positive environment
- Address model-related issues that arise during the product development process
- Stay up-to-date with the latest research trends in CV/ML and data-driven medicine
- Contribute to academia by publishing excellent research papers

Necessary Qualifications

PhD degree holder (or expected to graduate)
- Field: Medical Imaging or Computer Vision
- Background: Strong background in Deep Learning / Applied ML / CV.
- (Preferred) Publications: 2-3 peer-reviewed publications at a top-tier conference (CVPR/ECCV/ICCV/NeurIPS/ICML/ICLR/MICCAI) or journal (Nature Medicine, JAMA sub-journals/Radiology/MedIA/TMI/TPAMI/IJCV/JMLR)

Masters degree holder (or expected to graduate)
- Field: Computer Science, Electrical Engineering or related field
- Background: Strong background in Deep Learning / Applied ML / CV.
- (Preferred) Publications: 1 or more peer-reviewed publications at a top-tier conference (CVPR/ECCV/ICCV/NeurIPS/ICML/ICLR/MICCAI) or journal (MedIA/TMI/TPAMI/IJCV/JMLR)
- Work experience (desirable): 2+ years of experience in the AI industry

Software Engineering Skills
- Proficient in Python and use of frameworks such as PyTorch and Tensorflow
- Experience using git with multiple collaborators (E.g. git flow workflow)
- Familiar with container-based software development (E.g. docker)
- Contributions to open-source code repositories in CV, ML and related areas
- Ability to write clean, consistent and well-documented code

Compensation and Benefit

- Lunit promises the best compensation package in the industry
- Work-life balance (flexible working hours, flexible work-from-home, unlimited holidays)
- Meals paid by the company (lunch and dinner)
- Comprehensive medical screening (yearly)
- Healthcare expense support ($1,000 yearly)
- Accident insurance covered for all employees
- Patent incentive program
- Roundtrip supports for non-Koreans (yearly)
- Top-tier conference (CVPR/ECCV/ICCV/NeurIPS/ICML/ICLR/MICCAI) supports (yearly)

Research Engineer

Roles & Responsibilities

- Analyze and improve the performance of AI models by:
  - Applying state-of-the-art methods, that are presented in recent CV/ML papers
  - Applying AutoML methods or other hyper-parameter engineering techniques
  - Utilizing advanced image processing techniques to improve the generalization performance of AI models
  - Adding updated training samples and annotations to the training dataset
- Apply expert coding skills to the AI research and product frameworks:
- Analyzing and improving the efficiency, scalability, and stability of training, validation, and inference pipeline
- Adapting the training pipeline to best exploit modern parallel environments such as distributed clusters and TPUs in a cloud environment.
- Support internal large-scale inference activities
- Fast-prototyping of AI model for new medical problems

Necessary Qualifications

- BS, MS, or PhD degree in computer science or related field
- 2+ years of research or development experience based on deep learning methods
- 2+ years of experience in deep learning framework (e.g., PyTorch, TensorFlow)
- Outstanding programming skills demonstrated via course grades, demos, or contribution to open sources
- Familiarity with Git and experience in collaborating with Git

Preferred Experiences

- Software engineering achievements demonstrated via contributions to open source projects or coding competitions
- Experience in challenging the state-of-the-art in Computer Vision problems
- Experience in processing (bio)medical data
- Experience in collecting and processing large-scale real-world data
- Experience in modern parallel environments such as distributed systems or NPUs (e.g., TPU, Inferentia, BrainWave)
- Experiences in the AI industry
- Research engineering achievements demonstrated via AI competitions
- Academic achievements (top-tier conference/journal papers) in the AI field

Compensation and Benefit

- Lunit promises the best compensation package in the industry
- Work-life balance (flexible working hours, flexible work-from-home, unlimited holidays)
- Meals paid by the company (lunch and dinner)
- Comprehensive medical screening (yearly)
- Healthcare expense support ($1,000 yearly)
- Accident insurance covered for all employees
- Patent incentive program
- Roundtrip supports for non-Koreans (yearly)
- Top-tier conference (CVPR/ECCV/ICCV/NeurIPS/ICML/ICLR/MICCAI) supports (yearly)

Research Intern

About Research Internship

The intern will be integrated in the Research division and the topic can be either strongly research-oriented, or aligned with product-oriented research, depending on the current needs and interest of the applicants. The intern will be mentored by at least one of Researchers of the department, and have the chance to participate in a real-world research environment.

Roles & Responsibilities

- Perform research autonomously on state-of-the-art computer vision or medical image analysis, e.g. semi-supervised learning, domain generalization, etc.
- Contribute to product features
- Ideal outcome is a completed research project (for instance, in the form of a scientific paper submitted to a top-tier CV/ML/Medical Imaging conference) and/or presentation on a new product feature

Necessary Qualifications

- Undergraduate/Master's/Ph.D. student in computer science, electrical engineering, artificial intelligence, biomedical engineering or a related field
- Knowledge of AI demonstrated through coursework, challenges or open source projects
- Excellent programming skills and experience with mainstream Deep Learning libraries, e.g., PyTorch,TensorFlow, Keras
- Minimum of 3 months consecutive on-site availability

Preferred Experiences

- Currently pursuing graduate studies (e.g., M.Sc. or Ph.D.)
- Papers in top-tier journals or conferences (e.g., CVPR, NeurIPS, MICCAI, ICCV, TMI, PAMI, Medical image analysis)
- Development experience in real world applications of AI (e.g., computer aided diagnosis, face detection, natural language processing, etc.)
- Interest in applications of AI to health care
- Contributions to relevant open source projects
- Achievements in CV/ML/Medical Imaging competitions

How to Apply

Apply through email

- Send a freeform email to <apply@lunit.io>
- Specify a position that you apply for and attach your CV
- (Optional) Supplementary materials of past research or development

Or,

Apply through a website

- Visit here: https://apply.workable.com/lunit/
- Choose a position that you apply for and follow the steps
- (Optional) Supplementary materials of past research or development

Lunit

Conquer Cancer with AI

Precision Diagnostics & Therapeutics