

Yumin Suh

[Google Scholar Profile](#) [github.com/yuminsuh](#) yuminsuh.github.io [✉ dttlqqns@gmail.com](mailto:dttlqqns@gmail.com)

I am an AI Research Scientist at Atmanity. Before joining Atmanity, I was a Senior Researcher at NEC Labs America. My current research focuses on large vision-language model and visual representation that interacts with language.

Work Experience

Atmanity **January 2025 – Present**
AI Research Scientist *Santa Clara, CA*

NEC Laboratories America | [Media Analytics department](#) **December 2019 – January 2025**
Senior Researcher *San Jose, CA*

- Developed generative Large Vision-Language Models that take images/videos along with text as input and produce language outputs
- Developed a unified model that performs multiple tasks for rich human analysis

Microsoft Research Asia **September 2016 – June 2017**
Research Intern *Mentors: [Jingdong Wang](#), [Tao Mei](#)*

- Proposed a visual representation for person re-identification ([Publication](#) cited 600+ times)

Inria | [WILLOW team](#) **December 2014 – May 2015**
Research Intern *Mentors: [Minsu Cho](#), [Jean Ponce](#)*

Education

Seoul National University **Apr. 2019 – Nov. 2019**
Postdoc *Advisors: [Bohyung Han](#), [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2014 – Feb 2019**
Ph.D., Electrical and Computer Engineering *Advisor: [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2011 – Feb. 2013**
M.S., Electrical Engineering and Computer Science *Advisor: [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2007 – Feb. 2011**
B.S., Electrical Engineering

Workshop Organization

2nd OmniLabel workshop at ECCV 2024 [[Workshop](#)][[Benchmark](#)][[Challenge](#)]

Organizers: Vijay Kumar B G, [Yumin Suh](#), Samuel Schuler, Shiyu Zhao, Long Zhao, Dimitris N. Metaxas

1st OmniLabel workshop at CVPR 2023 [[Workshop](#)][[Benchmark](#)][[Challenge](#)]

Organizers: Samuel Schuler, Vijay Kumar B G, [Yumin Suh](#), Golnaz Ghiasi, Long Zhao, Qi Yu, Dimitris N. Metaxas

- Workshop to promote research on **language-based vision perception** system beyond simple category names
- New [benchmark](#) for language-based object detection

Papers

Progressive Token Length Scaling in Transformer Encoders for Efficient Universal Segmentation **ICLR 2025**
Abhishek Aich, [Yumin Suh](#), Samuel Schuler, Manmohan Chandraker

Improving the Efficiency-Accuracy Tradeoff of DETR-Style Models in Practice **ECV Workshop at CVPR 2024**
[Yumin Suh](#), Dongwan Kim, Abhishek Aich, Samuel Schuler, Jong-Chyi Su, Bohyung Han, Manmohan Chandraker

Generating Enhanced Negatives for Training Language-Based Object Detectors **CVPR 2024**
Shiyu Zhao, Long Zhao, Vijay Kumar BG, [Yumin Suh](#), Dimitris N. Metaxas, Manmohan Chandraker, Samuel Schuler

Taming Self-Training for Open-Vocabulary Object Detection **CVPR 2024**
Shiyu Zhao, Samuel Schuler, Long Zhao, Zhixing Zhang, Vijay Kumar BG, [Yumin Suh](#), Manmohan Chandraker, Dimitris N. Metaxas

Efficient Controllable Multi-Task Architectures

Abhishek Aich, Samuel Schuster, Amit K. Roy-Chowdhury, Manmohan Chandraker, [Yumin Suh](#)

ICCV 2023

OmniLabel: A Challenging Benchmark for Language-Based Object Detection

Samuel Schuster, Vijay Kumar B G, [Yumin Suh](#), Konstantinos M. Dafnis*, Zhixing Zhang*, Shiyu Zhao*, Dimitris Metaxas (* equal technical contribution, alphabetic order)

ICCV 2023 (Oral)

- New *dataset and benchmark* for *language-based detection*. Hosted the Omnilabel workshop in CVPR 2023

Confidence and Dispersity Speak: Characterizing Prediction Matrix for Unsupervised Accuracy Estimation

Weijian Deng, [Yumin Suh](#), Stephen Gould, Liang Zheng

ICML 2023

Split to Learn: Gradient Split for Multi-Task Human Image Analysis

Weijian Deng, [Yumin Suh](#), Xiang Yu, Masoud Faraki, Liang Zheng, Manmohan Chandraker

WACV 2023

Learning Semantic Segmentation from Multiple Datasets with Label Shifts

Dongwan Kim, Yi-Hsuan Tsai, [Yumin Suh](#), Masoud Faraki, Sparsh Garg, Manmohan Chandraker, Bohyung Han

ECCV 2022

Controllable Dynamic Multi-Task Architectures

Dripta S. Raychaudhuri, [Yumin Suh](#), Samuel Schuster, Xiang Yu, Masoud Faraki, Amit K. Roy-Chowdhury, Manmohan Chandraker

CVPR 2022 (Oral)

On Generalizing Beyond Domains in Cross-Domain Continual Learning

Christian Simon, Masoud Faraki, Yi-Hsuan Tsai, Xiang Yu, Samuel Schuster, [Yumin Suh](#), Mehrtash Harandi, Manmohan Chandraker

CVPR 2022

Cross-Domain Similarity Learning for Face Recognition in Unseen Domain

Masoud Faraki, Xiang Yu, Yi-Hsuan Tsai, [Yumin Suh](#), Manmohan Chandraker

CVPR 2021

Learning to Optimize Domain Specific Normalization for Domain Generalization

Seonguk Seo, [Yumin Suh](#), Dongwan Kim, Geeho Kim, Jongwoo Han, Bohyung Han

ECCV 2020

Stochastic Class-based Hard Example Mining for Deep Metric Learning

[Yumin Suh](#), Bohyung Han, Wonsik Kim, Kyoung Mu Lee

CVPR 2019

Part-Aligned Bilinear Representations for Person Re-identification

[Yumin Suh](#), Jingdong Wang, Siyu Tang, Tao Mei, Kyoung Mu Lee

ECCV 2018

Appearance Dependent Inter-Part Relationship for Human Pose Estimation

[Yumin Suh](#) and Kyoung Mu Lee

APSIPA 2016

Discrete Tabu Search for Graph Matching

Kamil Adamczewski, [Yumin Suh](#), Kyoung Mu Lee

ICCV 2015

Subgraph Matching Using Compactness Prior For Robust Feature Correspondence

[Yumin Suh](#), Kamil Adamczewski, Kyoung Mu Lee

CVPR 2015

Graph Matching via Sequential Monte Carlo

[Yumin Suh](#), Minsu Cho, Kyoung Mu Lee

ECCV 2012

Honors and Awards

Business Contribution Award, NEC Laboratories America

2024

- [NEC develops the technology to automatically generate explanatory text from video using video recognition AI x LLM, \(December 2023\)](#)

Business Contribution Award, NEC Laboratories America

2023

- [Aiming to realize human digital twins: Image analysis technology that efficiently senses the real world, \(August 2023\)](#)
- [NEC develops high-speed, high-precision technology to search for specific persons based on ambiguous appearance attribute information by analyzing camera images \(May 2023\)](#)

Outstanding Reviewer, CVPR 2023

2023

Outstanding Reviewer, ICML 2020

2023

3rd Place Award, VisDA-2019

2019

- *Visual Domain Adaptation Challenge, TASK-CV Workshop in ICCV 2019*
with Dongwan Kim, Geeho Kim, Seonguk Seo, Bohyung Han, Taeho Lee, Jongwoo Han, Hyejeong Jeon
- Doctoral Colloquium, KCCV 2019** **2019**
- Doctoral Colloquium, CVPR 2019** **2019**
- 3rd Place Award, SFMI Machine Learning Challenge 2017** **2017**
- *Challenge on the road sign letter recognition from road view images*, Samsung Fire & Marine Insurance, Korea
with Jihong Kang and Sungyong Baik
- Graduated with honors (Summa cum laude)** **2011**

Invited Talks

Elastic AI: Adaptive Solution for Multi-Task AI Challenges

- Korea University Feb 2024

Elastic AI for multiple tasks

- Company-wide talk May 2022
- [Lomin Inc.](#) Feburary 2022
- Guest lecture in “Moonshot project”, Korea University June 2022

Multi-task learning and domain generalization

- Guest lecture in Australian National University October 2021

Learning local matching for person re-identification

- Young Research Highlight, Summer Annual Conference of IEIE June 20219

Academic Services

Area Chair

- CVPR, ICCV (2025)
- CVPR (2024)
- ACCV (2022)

Senior Program Committee

- AAAI (2022)
- IJCAI (2021)

Program Committee

- AAAI (2025)
- ECCV, ICLR, ICML (2024)
- CVPR, ICCV, ICLR, ICML (2023)
- CVPR, ECCV, ICLR, ICML, IJCAI, NeurIPS (2022)
- AAAI, CVPR, ICCV, ICLR, ICML, NeurIPS, WACV (2021)
- AAAI, ACCV, CVPR, ECCV, ICPR, ICML (2020)
- CVPR, ICCV (2019)
- MM (2017)

Journal Reviewer

- TPAMI, TIP, TMM, TCSVT, CVIU, MMSJ, AOAS

Student volunteer

- ACCV 2012, MM 2018

Mentoring

- [Dohwan Ko](#) (Korea University) 2024
- [Youngmin Oh](#) (Yonsei University) 2023
- [Dongwan Kim](#) (Seoul National University) 2023
- [Abhishek Aich](#) (University of California, Riverside) 2022
- [Dripta Raychaudhuri](#) (University of California, Riverside) 2021
- [Weijian Deng](#) (Australian National University) 2020