

# Hyun Kang

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## Profile

**Understanding Foundations, Building Futures.** My approach is rooted in first-principles thinking, seeking to understand the fundamental 'why' behind complex problems. My expertise lies in 3D vision/graphics and diffusion models. I am currently exploring the potential of AI agents and their application to automation.

## Education

Mar 2022 - Jul 2024  
Seoul, Korea

### Yonsei University | MEng in Computer Science

- Cumulative GPA: 4.11 / 4.50
- Advisor: [Dr.In-Kwon Lee](#)
- Research Areas: 3D Vision, Physical Simulation, Diffusion Models
- Thesis: "Diffusion Guidance Tuning with Semantic Decomposition"

Mar 2018 - Feb 2022  
Seoul, Korea

### Yonsei University | BEng in Computer Science

- Cumulative GPA: 3.86 / 4.50

Jul 2012 - Aug 2017  
Nairobi, Kenya

### West Nairobi School

- Graduated with Salutatorian Honors

## Skills

### Technial Skills

- Main Language: Python (PyTorch, Open3D, LangChain)
- Web Development: React Framework (Next.js)
- Miscellaneous: Linux Commands, Git, Shell Scripting, LaTeX

### Soft Skills

- Effective Communication, Critical Thinking, Self-Motivation, Time Management
- Language: Korean (native), English (Proficient; TEPS: 474/600)

*\*underlines are links*

## Publications

arXiv, 2023

**Hyun Kang**, Dohae Lee, Myungjin Shin, In-Kwon Lee. 2023. "Semantic Guidance Tuning for Text-To-Image Diffusion Models." arXiv preprint arXiv:2312.15964 (2023).

SIGGRAPH ASIA, 2023

Dohae Lee, **Hyun Kang**, and In-Kwon Lee. "ClothCombo: Modeling Inter-Cloth Interaction for Draping Multi-Layered Clothes." ACM Transactions on Graphics (TOG) 42.6 (2023): 1-13.

## Projects

Jan 2025 - Feb 2025  
Solo Project

### **Tradinsight: Automated Crypto Trading Agent**

- Develop an automated crypto trading agent that uses technical analysis and sentiment analysis to make trading decisions.

Dec 2024 - Jan 2025  
Solo Project

### **AI Agent for Medication and Supplements Safeguards**

- Develop an AI agent app that can easily manage medications, check interactions, and ensure safety, especially for seniors

Dec 2021 - Mar 2022  
Solo Project

### **Designing and Prototyping a Full-Body 3D Scanner**

- (Hardware) Built a 3D scanner with extremely low budget (\$2,000)
- (Software) Develop a pipeline for an automated 3D reconstruction and 3D segmentation for clothes

Jun 2021 - Dec 2021  
Project Lead

### **Part-Aware 3D Reconstruction of a Clothed Avatar from a Single Image**

- Develop a pipeline for 3D avatar reconstruction from a single view image and auto-rigging for animation

Jan 2021 - Jun 2021  
Project Member

### **Detecting and Captioning Web Components**

- Build a dataset and train an AI model to detect web components (such as banners, images, sidebar)
- Develop a web extension for detecting and captioning web components for better UX of blind people.

Mar 2021 - May 2021  
Project Lead

### **Sizeyourself: Virtual Fitting Solution**

- Build a web app providing user size data for improved online retail experiences.

*\*underlines are links*

## Honors & Awards

Jan 2025	Grand Prize @ FastCampus AI Ideathon
Jun 2024	CLO Paper Award @ KCGS 2024
Sep 2024	<u>Grand Prize @ Yonsei Graduate Student Startup Competition</u>
Spring 2022 - Fall 2023	Yonsei University Graduate School Scholarship
Spring 2021, Winter 2021	Grand Prize @ Dept. of Computer Science Capstone Project

## Misc.

Spring 2022, Fall 2023	TA for "OOP" & "Understanding AI and Using AI"
Dec 2021 - Jun 2022	YAI (Yonsei Artificial Intelligence) <ul style="list-style-type: none"><li>• Research member</li></ul>
Mar 2022 - Feb 2024	<u>Virtual Fitting Start-up "Metown"</u> <ul style="list-style-type: none"><li>• Research Member; Research and summarize new virtual fitting technologies</li></ul>
Jun 2018 - Dec 2019	YBL (Yonsei Blockchain Lab) <ul style="list-style-type: none"><li>• IMAGURU blockchain hackathon</li><li>• Klaytn blockchain hackathon</li><li>• Ministry of Science and ICT blockchain report</li></ul>