

Seongjun Choi

M.S. Degree in Electrical and Electronic Engineering, Yonsei University

Bachelor of Software Convergence, Kyung-Hee University

Email: sjchoi.dp@gmail.com

Research: <https://drawingprocess.github.io/>

Web: <https://csj000714.tistory.com>

Github: <https://github.com/DrawingProcess>

EDUCATION

Mar.2025 – Feb.2027	Yonsei University M.S. Degree in Electrical and Electronic Engineering Image and Video Pattern Recognition Lab (MVP Lab) Advisor: Prof. Sangyoun Lee GPA 4.05 /4.3	Seoul, Korea
Mar.2019 – Feb.2025	Kyung-Hee University Bachelor of Software Convergence (Robot & Vision Track) GPA 3.6/4.5	Yongin, Korea

RESEARCH INTEREST

Spatial Intelligence Real World Problem Robotics 3D Computer Vision Autonomous Driving

RESEARCH EXPERIENCES

Mar.2025 – Feb.2027	MVP Lab - Research Keywords: Scene Understanding, Real World Problem, 3D Reconstruction. - Research Projects: Quantization(Samsung DA), Tracking(LIG D&A), 3D Recon(ETRI)	Yonsei University, Korea
Mar.2024 – Oct.2024	Visual AI Lab - Undergraduate Research Intern - Research Keywords: 3D Recon with Real World (NeRF, Low Resolution, Glare Surface, ...)	Kyung-Hee University, Korea
Jan.2024 – Feb.2024	Autonomous Intelligence Lab - Research Intern, Autonomous Driving Intelligence Research Section - Keywords: Instance Segmentation, Mono Depth Estimation, Pseudo LiDAR, Optimization - Improve 3D OD performance with Depth Estimation and Segmentation (Improve Acc over 4%, About 22 FPS)	ETRI, Korea
Aug.2021 – Aug.2023	V2X Researcher - Researched and developed C-ITS/V2X communication services and misbehavior detection. - Keywords: C-ITS, V2X Application, Misbehavior Detection(MBD)	PentaSecuritySystems, Korea

PUBLICATIONS (International)

- [1] “RelateGS: Reliable Semantic and Relational Evidence for 3D Scene Understanding”, WACV 2027, 1st Author.
- [2] “RefineSplat: Rectifying Mask via Entropy for Distractor-Free 3DGS in Ambiguous Scenarios”, WACV 2027
- [3] “SwiftCAD: Efficient Parametric CAD Generation with Shared Decoder Transformers”, CVPR-W 2026, 1st Author.
- [4] “InfoFusion Controller: Informed TRRT Star with Mutual Information based on Fusion of Pure Pursuit and MPC for Enhanced Path Planning”, International Conference on Consumer Electronics(ICCE) 2025 (Oral), 1st Author.

PUBLICATIONS (Domestic)

- [1] “Multi-Domain Object Tracking Enhanced by RandConv-based Domain Generalization”, IEIE 2025, 1st Author.
- [2] “Non-Glare-NeRF: To prevent unwanted glare: A Comparative Study”, KSC 2024, 1st Author.
- [3] “Codebook-NeRF: Improving NeRF resolution based on codebook”, KSC 2024, 1st Author.
- [4] “Exploring the Role of View Direction Settings in Depth Estimation with NeRF”, KCC 2024, 1st Author.
- [5] “[ITSK-00135] V2X Misbehavior and Misbehavior Report Specification” ITS-K 2022

UNDER REVIEW

[1] "PLASMA: Editable Latent Interfaces for Frozen Compositional Scene Generators", AAAI 2027

[2] "RootGS: Learning Object-Level Semantic Anchors for Open-Vocabulary 3D Gaussian Splatting", WACV 2027

RESEARCH PROJECTS

Jul. 2025 - (on-going)	실시간 임의 시점 실사뷰 생성을 위한 학습 및 추론 기술 연구, ETRI
Mar. 2025 - (on-going)	노이즈 데이터에 강인한 뉴럴 렌더링 기반의 대규모 3차원 초정밀 가상공간 생성 및 공간 정합 기술 연구, National Research Foundation of Korea
Mar. 2025 - Dec. 2025	딥러닝 기술을 이용한 다중 센서 기반 영상 개선 및 추적 기술 개발, LIG Nex1
Mar. 2025 - Oct.2025	RGBir 센서를 적용한 카메라 모듈 개발, Samsung Electronics

AWARDS

Feb. 2025	1st Prize , Korean Institute of Information Scientists and Engineers, Korea Software Congress 2024
Nov. 2024	1st Prize (Robot & Vision Track) , Kyung-Hee University, Software Convergence Conference 2024
Sep. 2023	1st Prize , Wrtn Prompthon, Wrtn Technologies
Jul. 2022	Excellence Award , "Autonomous Mini-Drone Aviation Competition", MathWorks

TEAM PROJECTS

1. Faster VirConv: lightweight and faster 3D Object Detection	Mar.2024 – June.2024
- Architectural Analysis and Lightweight Method for VirConv Models, including KD, Pruning, and Quantization - Finally, 6.2% faster with ROI Tuning and Quantization	
2. AuTURBO RDSim: Robo Delivery Simulator	Mar.2024 – May.2024
- Visualization of Rviz sensors and implementation of debugging dashboards - Configuring Map Environments and Applying Dynamic Obstacle SFM Models	
3. Drivable Area Detection: 3D LiDAR + Multi Camera Fusion	Sep.2023 – Dec.2023
- Analysis nuScenes Dataset & Sensor Calibration - Road Plane Segmentation: RANSAC & Removal Object Plane & Removal Shoulder Outside Plane	
4. Woowa Bros. Robot Delivery Challenge	Sep.2023 – Oct.2023
- Indoor driving based on navigation: 3D maps can be converted into an occupancy map for navigation - Outdoor driving based on GPS: Implementation of path tracking through pure pursuit compared to GPS location - Module integration(Sequence Manager): Focus on reusability, reliability and ease of maintenance	
5. Kookmin University Self-Driving Software Competition	May.2023 – July.2023
- Robot FSM (Limited State Machine) environment development and code integration - Development of Vision-related modules such as stop line recognition - Simplify the Object Detection process with ROSbag utilization and Yolo	

ADDITIONAL INFORMATION

Military Services

Alternative Military Service in PentaSecuritySystems (Aug.2021 - July.2023)

Activities

Yonsei VERY: Member, Entrepreneurship & Startup (Aug. 2026 – Feb. 2027)

Yonsei AI(YAI): Member, 3D Vision Research (Jun. 2025 – Feb. 2027)

PseudoLab: Builder, 3D Scene Reconstruction (Jun.2024 - Feb.2026)

OROCA AuTURBO: Manager. Autonomous Driving Perception (Mar.2023 - May.2024)

Open Source Contribution Academy:Contributor, Open-Source Development (May 2023 – Dec. 2023)

San Jose State University: Silicon Valley Innovation & Technology Program (Jan.2021 - Feb.2021)