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Jaemin Cho

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Education

Stony Brook University — *Aug. 2024 – Dec. 2026 (Expected)*
M.S. Candidate in Computer Science — GPA: 3.9/4.0
Advisor: François Rameau
Thesis: *Privacy Exposure and Omnidirectional Generalization in Scene Coordinate Regression for Visual Localization*

Inha University — *Mar. 2018 – Jun. 2024*
B.E. in Electronic Engineering — *(Two-year military service)*
Stony Brook University, Exchange Student — *Jan. 2023 – May 2023*

Publications

Seeing Through the Weights: Privacy Leakage in Scene Coordinate Regression
Oleksii Nasypanyi*, **Jaemin Cho***, Utku Ozbulak, Byungkon Kang, François Rameau.
European Conference on Computer Vision (ECCV), 2026. **Long Oral** (top **0.27%**).
Paper Page Code Presentation **Equal contribution*

Ray-SCR: Generalizing Scene Coordinate Regression Across Camera Models
Jaemin Cho, Oleksii Nasypanyi, François Rameau.
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2027.
Paper Page Code

Research

3D Scene Representations · Visual Localization · Spatial AI

Spatial Intelligence Lab — *Aug. 2024 – Present*
Graduate Research Assistant

Privacy Leakage in Scene Coordinate Regression — *ECCV 2026 · Long Oral*

- Recovered the 3D geometry and appearance of private scenes from trained SCR models using only unrelated query images with a stability score for reliable predictions, challenging the claim that network weights alone are privacy-preserving.
- Revealed leakage on private scenes at mean F1@5 cm of 83% from query access alone and 94% with the weights, held across four SCR architectures indoors and outdoors, with recognizable novel views rendered from the known poses.

Generalizing Scene Coordinate Regression Across Camera Models — *WACV 2027*

- Conditioned SCR predictions on each pixel's calibrated viewing ray and anchored them to sparse SfM points, enabling a single SCR model trained on a 360° image sequence to localize pinhole, fisheye, and 360° queries.
- Achieved state-of-the-art localization performance on 360Loc for all five camera types, day and night, and on OmniScenes, outperforming explicit-map methods while using 77× less storage.

Lattice-SCR: Privacy-Preserving Visual Localization — *Ongoing · Lead*

- Folded predicted scene coordinates into a periodic lattice cell, defending against inversion attacks while keeping localization accuracy, training time, and model size on par with vanilla SCR models.

Media & Talks

Interview, Computer Vision News *Sep. 2026*
ECCV 2026 Daily – Saturday, pp. 2–6 · *Seeing Through the Weights* Magazine

Short Talk, Privacy-Preserving Visual Localization and Mapping (PPVLM) *Sep. 2026*
ECCV 2026 Workshop · *Seeing Through the Weights*

Poster, 3rd Int. Workshop on Privacy-Preserving Computer Vision *Sep. 2026*
ECCV 2026 Workshop · *Seeing Through the Weights*

Poster, General Motors Technical Center Korea *Oct. 2026*
GMTCK AI week 2026 · *Seeing Through the Weights*

Funding

Graduate Research Assistantship & Full Tuition Waiver *Aug. 2024 – Present*
IITP Innovative Human Resource Development · Funded by the Korea government (MSIT)

Awards

President's Award (1st Prize, SBU Graduate) *Nov. 2025*
SUNY Korea Research Challenge; winner among 59 teams.
Poster: *"Privacy Attacks on Scene Coordinate Regression for Camera Re-localization"*

President's Award (Grand Prize) *Jun. 2022*
Industry-driven Capstone Design Contest, Inha University; winner among 9 teams.
Project: *"Carbon Monoxide Detector for Honeywell Korea"*

Work Experience

Korea Electric Power Corporation Research Institute *Sep. 2023 – Feb. 2024*
Research Intern Demo

- Built the ergonomic risk-assessment module for the Hyper-Realistic Safety Training System, Auggie Award winner at Augmented World Expo (AWE) USA 2024.
- Optimized a MobileNetV3-based 2D pose-estimation pipeline for real-time risk assessment, cutting latency by 7 ms and compute by 30M MACs versus the original pipeline.

Visionin *Jul. 2023 – Aug. 2023*
AI Engineer Intern

- Improved YOLOv4 fire-detection mAP by 6 percentage points and reduced false alarms by 9% for deployment across 19 department-store CCTV systems.

Teaching

SUNY Korea AI Summer School *Jul. 2026*
Teaching Assistant — Led hands-on computer vision labs for 43 students.

Mentoring

5th Annual Nepal AI School (ANAIS) *Dec. 2024 – Jan. 2025*
Mentored the winning team in the Anti-Money Laundering Challenge Hackathon.

Skills

Programming: Python, C/C++
ML & Vision: PyTorch, OpenCV, COLMAP, pycolmap, hloc, PoseLib
Systems & Tools: Linux, Git, Docker

Military Service

U.S. Army, 35th Air Defense Artillery Brigade *2019 – 2021*
KATUSA Sergeant (Korean Augmentation to the U.S. Army), HR Specialist (42A)