

# Ge (James) Jin

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## EDUCATION

### New York University, Tandon School of Engineering

New York, NY

Bachelor of Science in Computer Science, Minor in Mathematics (GPA: 3.97/4.00)

Sept 2022 - Dec 2025

Dean's List for Academic Year 2022-2023, 2023-2024, 2024-2025

## PUBLICATIONS

- [1] A. Yang\*, **G. Jin\***, J. Huang, Y. Wang, J.-R. Rizzo, and C. Feng, "Distillation improves visual place recognition for low quality images," in *Proceedings of the IEEE/CVF International Conference on Computer Vision workshops*, 2025.
- [2] Y. Lau, C. Chen, **G. Jin**, and C. Feng, "Flexible and Efficient Spatio-Temporal Transformer for Sequential Visual Place Recognition," under review at *the IEEE International Conference on Robotics & Automation*, 2026.

\* Equal contribution

## EXPERIENCES

### 2026 IEEE International Conference on Robotics & Automation

Reviewer & Author of Submitted Manuscript [2]

Sept 2025 - Nov 2025

### Wei Ji Ma Lab, NYU Center for Neural Science

Research Assistant

Oct 2024 – Present

- Study collaborative human planning with a connect-the-dots task inspired by the traveling salesman problem
- Built eye data analysis pipelines and multiplayer experiment software synchronized with eye tracker
- Designed difficult scenarios by comparing optimal and greedy policies and validated them on real participants

### Automation and Intelligence for Civil Engineering lab (AI4CE Lab), NYU Tandon

Research Assistant, Supervised by Professor Chen Feng

Collaborative 3D Reconstruction for Embodied AI

Oct 2024 – Present

- Developing an algorithm for inferring unified 3D point clouds using images from multiple embodied agents
- Analyzed interpretability of latent features and attention weights of related models (eg. [CUT3R](#))
- Overcome single-agent constraint of existing datasets through designing discontinuous image sequences

Visual Place Recognition (VPR) for Low Quality Images [1]

Oct 2023 – March 2025

- Performed knowledge distillation on VPR algorithms to improve performance under low image quality
- Utilized 11 VPR image datasets (both indoors/outdoors) across urban and rural environments
- Analyzed VPR algorithms' attention towards specific image parts through plotting activation maps

Sequential Lightweight VPR with Recurrence [2]

May 2025 - Sept 2025

- Compared a proposed recurrent VPR model based on [STFormer](#) against single-image VPR methods
- Developed a runtime-constrained criteria to demonstrate efficiency of proposed method against baselines

Applied Simultaneous Localization and Mapping (SLAM)

Sept 2022 - Dec 2023

- Co-developed GPS-free navigation software utilizing OpenVSLAM and migrated system to StellaVSLAM
- Parallelized the system's RANSAC pipeline for image feature matching outlier detection
- Implemented Android user interfaces for field testing with blind and low vision subjects

### Autonomous Vehicle Systems Lab, Technical University of Munich

Jul 2025 - Aug 2025

Selected Participant of TUM PREP Program — Research under Professor Johannes Betz

- Reduced sensor dependency of the end-to-end self driving method DiffusionDrive by removing LiDAR
- Inferred LiDAR point cloud input using image-based foundation model VGGT

### NYU Tandon Computer Science & Engineering, CS-UY 2124 Object-Oriented Programming

Teaching Assistant

Sept 2023 - Dec, 2025

- Implement C++ model-based auto-testing using fMBT tool deployed via Docker
- Review C++ code to assess encapsulation, delegation, and inheritance-based reuse

### Group on Applied Telecommunications, University of Antioquia, Medellín, Colombia

May 2024- Jul 2024

Research Intern, Supervised by Professor Juan Rafael Orozco Arroyave

- Created a Python toolkit for end-to-end audio & video classification with SVM, random forest, and XGBoost
- Built visualizer for input attributions of transformer encoders for sequence classification (based on [Ecco](#))

### NYU Undergraduate Summer Research Program

Jun 2023 - Aug 2023

Selected Participant — Research Under Professor Chen Feng

- Customized deep learning-based inertial odometry methods (e.g. [AI-IMU dead reckoning](#)) for real-world tests
- Designed and built an experimental platform using mobile phones for data collection and automatic labelling

## CONTESTS AND AWARDS

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|--|---------------------|
| 1st Place - EVOLVE24 AI Impact Hackathon, Cloudera                                 | Oct 2024            |
| NYU Tandon TCS Writing Award - Philosophy of Science Final Project                 | Apr 2024            |
| Successful - The Interdisciplinary Contest in Modeling (ICM), COMAP                | Feb 2023            |
| 2nd Place - Cloudera Applied Machine Learning Prototype Hackathon, HackerEarth     | Dec 2022 - Jan 2023 |
| Outstanding - SIMIODE Challenge Using Differential Equations Modeling VII, SIMIODE | Oct 2022            |

## SELECTED COURSEWORK

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**CS-UY 4563 Introduction to Machine Learning** - Grade: A Fall 2024

Benchmarked logistic regression, SVM, and ResNet18, 34, and 50 on CIFAR-10 image classification ([github](#))

**ROB-UY 3203 Robot Vision** - Grade: A Spring 2025

Utilized image matching through ORB / SIFT features aggregated by VLAD to solve maze navigation

**CS-UY 3943 Special Topics in Computer Science: Neuroinformatics** - Grade: A Spring 2025

Decoded motion from IBL's *in vivo* mice [electrophysiology dataset](#) with a clusterless PointTransformer ([github](#))

**CSCI-UA 453 Theory of Computation** - Grade: A- Spring 2025

Topics: Finite and pushdown automata, regular and context free languages, decidability of problems, NP-completeness

**PHIL-UA 80 Philosophy of Mind** - Grade: A Fall 2024

Topics: sapience and AI (e.g. the Blockhead), functional role semantics, cognitive access, theories of consciousness

## SKILLS

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- **Technical:** C++, Python, Java, PyTorch, concurrency, Android development, Ubuntu, Slurm, LaTeX
- **Languages:** English (Native), Mandarin Chinese (Native), Spanish (CEFR B2~C1)