Shutong Jin

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EDUCATION

KTH Royal Institute of Technology — Nov. 2022 – Present
Computer Science, Doctoral Student — Stockholm, Sweden

Nanyang Technological University — Aug. 2021 – July 2022
Computer Control and Automation, Master (GPA:4.75/5.0) — Singapore

Ecole Centrale de Nantes — Sept. 2020 – June 2021
Signal, Control and Robotics, Foundation Master (GPA:5.0/5.0) — Nantes, France

Wuhan University — Sept. 2017 – June 2021
Electronic Information Engineering, Bachelor (GPA:87/100) — Wuhan, China

RESEARCH

Supervisor: Florian T. Pokorny (main supervisor), Erik Elmroth (co-supervisor)

Interest: Robotic Data Curation, Generative Modeling, Computational Illumination, Cloud Robotics

PUBLICATIONS

Physically-based Lighting Augmentation for Robotic Manipulation
Shutong Jin*, Lezhong Wang*, Ben Temming and Florian T. Pokorny
Under Review.

Can Visuo-motor Policies Benefit from Random Exploration Data? A Case Study on Stacking
Shutong Jin*, Axel Kaliff*, Ruiyu Wang, Zahid Muhammad and Florian T. Pokorny
Under Review.

One-Shot Federated Learning with Classifier-Free Diffusion Models
Obaidullah Zaland*, ***Shutong Jin****, Florian T. Pokorny, Monowar Bhuyan
IEEE International Conference on Multimedia & Expo (ICME) 2025.

PACA: Perspective-Aware Cross-Attention Representation for Zero-shot Scene Rearrangement
Shutong Jin*, Ruiyu Wang*, Kuangyi Chen, Florian T. Pokorny
Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2025.

Feature Extractor or Policy Learner: Rethinking the Role of Visual Encoders in Visuomotor Policies
Ruiyu Wang, Zheyu Zhuang, ***Shutong Jin***, Nils Ingelhag, Danica Kragic, Florian T. Pokorny
2025 IEEE International Conference on Robotics & Automation (ICRA).

How Physics and Background Attributes Impact Video Transformers in Robotic Manipulation: A Case Study on Planar Pushing
Shutong Jin, Ruiyu Wang, Muhammad Zahid and Florian T. Pokorny
2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

CloudGripper-Push-1K: Understanding the Generalization Gap of Physics and Background Attributes for Robotic Manipulation
Shutong Jin, Ruiyu Wang, Zahid Muhammad and Florian T. Pokorny
IEEE/RSJ IROS 2024 Workshop on Collecting, Managing, and Utilizing Data through Embodied Robots.
Best Poster Award

CloudGripper-AutoGrasper: A Cloud Robotics Toolkit for Automatic Data Collection
Axel Kaliff, ***Shutong Jin***, Zahid Muhammad and Florian T. Pokorny
IEEE/RSJ IROS 2024 Workshop on Collecting, Managing, and Utilizing Data through Embodied Robots.

Attention Control as a Tool for Zero-shot Consistent Video Editing
Shutong Jin, Ruiyu Wang and Florian T. Pokorny
32nd International Conference on Neural Information Processing.

SectionKey: 3-D Semantic Point Cloud Descriptor for Place Recognition
Shutong Jin*, Zhenyu Wu*, Chunyang Zhao, Jun Zhang, Guohao Peng and Danwei Wang

2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

STUDENT SUPERVISION

Invariant Lighting Composition for Robotic Manipulation Jul. 2025 – Present
Digital Futures Summer Internship, Student: Jin Yang

Fooling Imitation Learning Policies in the Real World: A Case Study on Pick-and-Place Jan. 2025 – Present
DD2411 Project Course, Student: Ben Temming

Simulation-in-the-Loop: Real-Time Robot Action Verification Using Digital Twin Jan. 2024 – Dec. 2024
Master Thesis, DD2411 Project Course, Student: Axel Kaliff

ACADEMIC ACTIVITIES

Workshop Organization:
RoDGE: Robotic Data Generation and Evaluation: Bridging Simulation and Real-World Deployment, IROS2025
Grant Proposal Contribution:
Digital Future Summer Research Internship Program 2025, 60,000 SEK

TEACHING

DD1420 Introduction to Machine Learning, Assistant
DD2424 Deep Learning, Assistant

INDUSTRIAL EXPERIENCE

Panasonic R&D Center Singapore May 2022 – Nov. 2022
3D Analysis and Reconstruction, R&D Engineer Singapore