

Xinrui Gong

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EDUCATION

M.Sc. Computational Engineering , Technical University of Darmstadt Focus: Machine Learning & Computer Vision Grade: 1.19/1 (top 10%, scale 1.0-5.0, 1.0 best) Relevant courses: Computer Vision; Deep Learning for Natural Language Processing; Deep Learning: Architectures & Methods; Statistic Machine Learning; Machine Learning in Information and Communication Technology; Computer Graphics	Oct 2021 - Mar 2025
B.Eng. Mechanical Engineering , China University of Petroleum (East China) Focus: Intelligent Machinery Grade: 89.9/100 (Ranking 2/54)	Sep 2016 - Jun 2020

PUBLICATIONS

Xinrui Gong*, Oliver Hahn*, Christoph Reich, Krishnakant Singh, Simone Schaub-Meyer, Daniel Cremers, Stefan Roth.
“Motion Refined DINOSAUR for Unsupervised Multi-Object Discovery”. *Under review at ICCV, 2025*

PROFESSIONAL EXPERIENCE

Student Research Assistant , Visual Inference Lab - TU Darmstadt <i>Advisors: M.Sc. Oliver Hahn, Prof. Stefan Roth, Ph.D.</i> Topic: Extending master's thesis to paper submission.	Nov 2024 - present
Master's Thesis , Visual Inference Lab - TU Darmstadt <i>Advisors: M.Sc. Oliver Hahn, Prof. Stefan Roth, Ph.D.</i> Topic: Refining DINOSAUR for Unsupervised Instance Segmentation <ul style="list-style-type: none">Developed a motion pseudo-label generation pipeline from videos.Developed a method to incorporate the pseudo-labels into the object-centric learning model DINOSAUR, achieving state-of-the-art performance in unsupervised object discovery.	Apr 2024 - Oct 2024
Student Research Assistant , Institute for PTW - TU Darmstadt <i>Advisors: M.Sc. Feng Zhu</i> Topic: Development of a weld seam detection system utilizing the YOLOv5 model.	Apr 2023 - Oct 2023
Bachelor's Thesis - China University of Petroleum (East China) <i>Advisors: Prof. Dr. Cai Luo</i> Topic: Design of Three Degree of Freedom Underwater Manipulator System	Feb 2020 - Jun 2020

UNIVERSITY PROJECTS

Visual Computing Lab , Interactive Graphics Systems Group, Fraunhofer IGD Topic: NCA (Neural Cellular Automata): From Inaccurate Training-Labels to High-Quality Segmentation
Deep Learning Architectures and Methods , Artificial Intelligence and Machine Learning Lab, TU Darmstadt Topic: Predicting Instagram Like Count via Deep Neural Networks

AWARDS

Graduation Scholarship for International Students at TU Darmstadt	2024
Outstanding Graduates of China University of Petroleum (East China) (Top 5%)	2020
“Meritorious Winner” of International Mathematical Contest In Modeling (Top 7%)	2020
University Scholarship I for Excellent Academic Achievements (Top 5%)	2019
China National Scholarship (Top 0.2%)	2017

SKILLS

Programming: Python [PyTorch, NumPy, OpenCV, Matplotlib, Hydra], Matlab, Git, LaTeX, Bash, Linux
Languages: **German** - Fluent [UNlcert C1], **English** - Fluent [UNlcert C1], **Chinese** - Native