Zimin Xia

Nationality: Chinese
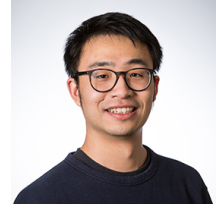Date of birth: 1994.02.21
Email: zimin.xia@epfl.ch
Address: Lausanne, Switzerland
Homepage: https://ziminxia.github.io/
Google Scholar: https://scholar.google.com/citations?user=Wl7NqjoAAAAJ&hl=en

RESEARCH INTERESTS	**Visual Localization, Ground-to-Aerial Image Matching, 3D Computer Vision, Representation Learning, Self-Supervised Learning, Environment Perception for Autonomous Driving**

EXPERIENCE

EPFL, Switzerland   Since Mar. 2024
PostDoc Researcher, topic: *Visual Localization and Mapping*
Advisor: Prof. Alexandre Alahi

Delft University of Technology, The Netherlands   Oct. 2019 - Mar. 2024
Ph.D. student, topic: *Efficient Deep Learning for Robot Localization*
Supervisors: Prof. Julian F. P. Kooij , Prof. Dariu M. Gavrila
Collaborate with TomTom, Amsterdam, The Netherlands
Dutch Research Council funded project: Efficient Deep Learning

University of Stuttgart, Germany   Oct. 2016 - Jul. 2019
Master of Science, Geomatics Engineering
Master Thesis at Carl Zeiss AG, Germany:
Stereo Reconstruction of Human Faces with Deep Learning

Wuhan University, China   Sep. 2012 - Jun. 2016
Bachelor of Science, Geodesy and Geomatics Engineering

SELECTED PUBLICATIONS

Adapting Fine-Grained Cross-View Localization to Areas without Fine Ground Truth
Zimin Xia, Yujiao Shi, Hongdong Li, Julian F. P. Kooij
European Conference on Computer Vision (ECCV), 2024
Linked to: Paper

Convolutional Cross-View Pose Estimation
Zimin Xia, Olaf Booij, Julian F. P. Kooij
IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), 2023
Linked to: Paper, Code

SliceMatch: Geometry-guided Aggregation for Cross-View Pose Estimation
Ted Lentsch*, **Zimin Xia***, Holger Caesar, Julian F. P. Kooij
*: Equal contribution
Conference on Computer Vision and Pattern Recognition (CVPR), 2023
Linked to: Paper, Code, Video

Visual Cross-View Metric Localization with Dense Uncertainty Estimates
Zimin Xia, Olaf Booij, Marco Manfredi, Julian F. P. Kooij
European Conference on Computer Vision (ECCV), 2022
Linked to: Paper, Code, Video

Cross-View Matching for Vehicle Localization by Learning Geographically Local Representations
Zimin Xia, Olaf Booij, Marco Manfredi, Julian F. P. Kooij

IEEE Robotics and Automation Letters (IEEE RA-L), 2021
Linked to: Paper, Code, Video

Geographically Local Representation Learning with a Spatial Prior for Visual Localization
Zimin Xia, Olaf Booij, Marco Manfredi, Julian F. P. Kooij
European Conference on Computer Vision (ECCV), 2020, Workshop on Map-based
Localization for Autonomous Driving, Oral Presentation
Linked to: Paper, Code, Video

ACADEMIC ACTIVITIES	**Attended International Computer Vision Summer School (ICVSS) 2022**	
	Reviewer for T-PAMI, CVPR, ECCV, T-RO, RA-L, ICRA, IV	
TEACHING ASSISTANT	**Machine Learning for Robotics**	2020 - 2023
	3D Robot Vision	2020 - 2021
	Intelligent Vehicles	2019 - 2020
MSC THESIS SUPERVISION	**Cross-View Camera Pose Estimation By Matching Local Features in 3D**	
	Sviatoslav Voloshyn	Oct. 2022 - Aug. 2023
	Improving Cross-View Matching with Self-Supervised Learning	
	Jianfeng Cui	Jan. 2022 - Jan. 2023
	SliceNet: Street-to-Satellite Image Metric Localization using Local Feature Matching	
	Ted de Vries Lentsch	Nov. 2021 - Oct. 2022
LANGUAGE	**English**: Professional proficiency	
	German: Elementary proficiency	
	Chinese: Native	
HOBBIES	In my free time, I enjoy reading and doing sports. I am passionate about playing basketball and swimming. During my high school years in China, I was a national second-grade swimmer.	