Zimin Xia

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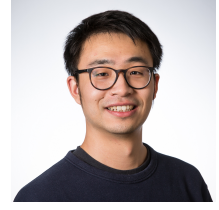Date of birth: 1994.02.21
Email: zimin.xia@epfl.ch
Address: Lausanne, Switzerland
Homepage: https://ziminxia.github.io/
Google Scholar: `https://scholar.google.com/citations?user=Wl7NqjoAAAAJ&hl=en`

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

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.