Weizhe Liu

PERSONAL INFORMATION

PhD Candidate
Computer Vision Laboratory
School of Computer and Communication Sciences
École Polytechnique Fédérale de Lausanne

Name: **Weizhe Liu**
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https://weizheliu.github.io

RESEARCH INTEREST

Scene Understanding, Crowd Counting, Semantic Segmentation, Domain Adaptation, Un/Semi/Weakly-Supervised Learning, Adversarial Learning

EDUCATION

2017-2021(expected): Doctoral Assistant, Computer Vision Laboratory
Supervisor: Prof. Pascal Fua
School of Computer and Communication Sciences
École Polytechnique Fédérale de Lausanne (EPFL)

2016-2017: Visiting Student, Vision Lab,
Supervisor: Prof. Stefano Soatto
University of California, Los Angeles (UCLA)

2014-2017: Master of Communication Systems
School of Computer and Communication Sciences
École Polytechnique Fédérale de Lausanne (EPFL)

2010-2014: Bachelor of Electronic Information Engineering
School of Electronic Engineering
University of Electronic Science and Technology of China (UESTC)

WORK EXPERIENCE

07/2020-10/2020: Applied Scientist Intern, Amazon
Work with: Dr. Christian Leistner, Dr. David Ferstl, Dr. Samuel Schulter and Dr. Lukas Zebedin
Topic: Semi-Supervised Domain Adaptation for Semantic Segmentation

02/2016-8/2016: Computer Vision Engineer Intern, NVISO
Work with: Timothy llewellynn and Dr. Matteo Sorci
Topic: Lightweight Caffe Framework for Embedded Systems

PREPRINTS

- **Weizhe Liu**, Mathieu Salzmann, Pascal Fua : *" Using Depth for Pixel-Wise Detection of Adversarial Attacks in Crowd Counting".*
- **Weizhe Liu**, Mathieu Salzmann, Pascal Fua : *" Counting People by Estimating People Flows". (Extension of our ECCV 2020 paper)*

PUBLICATIONS

- **Weizhe Liu**, Mathieu Salzmann, Pascal Fua : *" Estimating People Flows to Better Count Them in Crowded Scenes". The European Conference on Computer Vision (ECCV 2020), Glasgow, UK, 2020*
- **Weizhe Liu**, Krzysztof Lis, Mathieu Salzmann, Pascal Fua : *" Geometric and Physical Constraints for Drone-based Head Plane Crowd Density Estimation in Videos". The IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2019), Macau, China, 2019 .*
- **Weizhe Liu**, Mathieu Salzmann, Pascal Fua : *" Context-Aware Crowd Counting ". The IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2019), Long Beach, US, 2019.*

TEACHING

- CS-233(a), Introduction to machine learning(BA3)
- CS-233(b), Introduction to machine learning (BA4)

- MATH-233, Probabilities and statistics
- MATH-101(e), Analysis I

Professional Services

Reviewer of major computer vision conferences (*CVPR*, *ECCV etc.*) and journals (*T-PAMI*, *IJCV*, *TIP etc.*).

Relevant Skills

- **Programming Language:** Python, MATLAB, C++
- **Software Framework:** PyTorch, OpenCV, TensorFlow