

# NANDO METZGER

As a motivated PhD candidate at ETH Zürich's Photogrammetry and Remote Sensing group, I am guided by Prof. Dr. Konrad Schindler in my pursuit of knowledge. My research interests center around computer vision, weakly supervised learning, and super-resolution, exploring their potential implications in the realm of remote sensing.



## CONTACT

**E-mail:** nando.metzger@geod.baug.ethz.ch  
**Phone:** +41 79 554 68 65  
**Location:** Zürich, Switzerland  
**Website:** nandometzger.github.io/  
**Twitter:** @nandometzger  
**LinkedIn:** Nando Metzger  
**ORCID:** 0000-0002-0299-3064  
**Google Scholar:** Nando Metzger

## SKILLS

### Programming

Python	██████
LaTeX	██████
R	██████
Matlab	██████
C++	███

### Operating Systems

Linux	██████
Windows	██████

### Software & Tools

Pytorch	██████
Tensorflow	██████
Scikit Learn	██████
OpenCV	██████
Google Earth Engine	██████
GIS	██████
Git	██████
CloudCompare	██████
Agisoft Metashape	██████

### Languages

German	██████
English	██████
French	███
Italian	███

### Awards

2022 Karl Kraus award (1st)  
2020 Karl Kraus award (3rd)

## EXPERIENCE

⌚ 2021 - present

📍 ETH Zürich

Throughout my PhD research under Prof. Dr. Konrad Schindler's mentorship, I have contributed to academic advancements in computer vision, leading to publications in top conferences (CVPR), high-impact journals (Nature, Scientific Reports), and remote sensing. In addition to my research contributions, I have supervised numerous undergraduate students, nurturing their growth in the field. My collaboration with the International Committee of the Red Cross exemplifies my commitment to creating real-world impact.

### PHD Student

⌚ 2019 - 2021

📍 ETH Zürich

As the first author, I explored the use of recurrent neural networks and neural ordinary differential equations (NODE) for crop classification, with our findings published in a notable IEEE TGRS paper, showcasing the techniques' potential in agricultural applications.

### Part-time Research Assistant

⌚ 2018 - 2019

📍 Barry Callebaut, Zürich

I developed a machine learning classifier that helped the company achieve its sustainability goals.

### Data Scientist

⌚ 2017 - 2021

📍 ETH Zürich

I was a teaching assistant for the lectures of Geodata Analysis and Geodetic Measurement Tools

### Teaching Assistant

## EDUCATION

⌚ 2016 - 2021

📍 ETH Zürich

During my studies at ETH Zürich (BSc/MSc Geomatics) I built a solid foundation in machine learning through courses like Introduction to Machine Learning, Machine Perception, Computational Intelligence Lab, Computer Vision, and Image Interpretation. My master's thesis, supervised by Prof. Dr. Konrad Schindler, focused on remote sensing research, further enhancing my understanding of both theoretical and practical aspects of machine learning for a successful career in the field.

### Bachelor/Master of Science

## HIGHLIGHT PUBLICATIONS

Guided Depth Super-Resolution by Deep Anisotropic Diffusion

👤 Nando Metzger, RC. Daudt, K. Schindler

⌚ 2023      📄 CVPR, accepted

Fine-Grained Population Mapping from Coarse Census Counts and Open Geodata

👤 Nando Metzger, JE. Vargas-Muñoz, RC. Daudt, B. Kellenberger, TTT. Whelan, F. Ofli, Muhammad Imran, K. Schindler, D. Tuia

⌚ 2022      📄 Nature, Scientific Reports, published

Crop Classification under Varying Cloud Cover with Neural Ordinary Differential Equations

👤 Nando Metzger, MO. Turkoglu, S. D'Aronco, JD. Wegner, K. Schindler

⌚ 2021      📄 IEEE Transactions on Geoscience and Remote Sensing, published

## GENERAL SKILLS

Weakly supervised learning

Anisotropic Diffusion

Satellite Images

Geodesy

Photogrammetry

RNNs

Neural ODEs

Photography