Antonin Vobecky

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https://vobecant.github.io

Education

Czech Technical University in Prague — Prague, Czechia
Ph.D. in Computer Vision and Machine Learning — 2019 - *ongoing*

- Advisors: Josef Sivic (Czech Technical University, Prague), Patrick Pérez (Kyutai, Paris)
- Research area: Weakly supervised learning for visual recognition
  Research on the training of machine learning models with limited annotated data available using multi-modal information from image, text and 3D.

Czech Technical University in Prague — Prague, Czechia
Master degree in Computer Vision and Image Processing — 2017 - 2019

- Thesis: Data Augmentation for Neural Networks Training
  In this thesis, I developed an approach to extend the training or validation datasets of machine-learning models using generative neural networks.

Selected Publications

A. Vobecky et al., Pop-3D: Open-vocabulary 3D occupancy prediction from images. In *NeurIPS*, 2023.

A. Vobecky et al., Drive&segment: Unsupervised semantic segmentation of urban scenes via cross-modal distillation. In *ECCV*, 2022.   *Oral presentation (top 3%)*

A. Vobecky et al., Artificial dummies for urban dataset augmentation. In *AAAI*, 2021.

Internships

valeo.ai | Paris, France — '22,'23,'24

- Research following the direction of my Ph.D. topic.

CTU in Prague, VRG | Prague, Czechia — Jul.'17–Sep.'17

- Summer student research internship in the VRG group led by Jiri Matas.

Work Experience

Valeo | Prague, Czechia — Sep.'17–ongoing

- Research in computer vision algorithms for autonomous cars.

Awards and Honors

- *Essay competition winner* at ICVSS'23 — 2023
- *Oral presentation* of paper at ECCV (top 3% of papers) — 2022
- *Academic Scholarship*, CTU in Prague & Valeo — 2017
- *Dean's award* for bachelor thesis — 2017

Skills

Languages: English (fluent), Czech (native), German (beginner), French (beginner).

Programming: Python, Linux shell, MATLAB.

Machine learning: PyTorch, Tensorflow, scikit-learn, numpy

Presentation and communication skills, team player

Research Interests

machine learning, computer vision, learning with limited annotated data

multi-modal models (image+language), large language models, self-supervised learning, transformers, language-image alignment

Others

Hobbies: sports, hiking, reading, friends

Volunteering: help in a local nursing home during COVID pandemic, work at poor regions in Czech borderlands (SummerJob)

Work with kids and young adults: summer camp "Runway", formative and animation course "LIFT"

Academic Services

Reviewer for: International Journal of Computer Vision, The IEEE/CVF Conference on Computer Vision and Pattern Recognition, Conference on Neural Information Processing Systems, IEEE Robotics and Automation Letters