Andrii Zadaianchuk

Education

ETH Zürich, Switzerland **04.2019 - 01.2024**
Ph.D. Student, Max Planck ETH Center for Learning Systems
Unsupervised object-centric representation learning for autonomous control

Universität Tübingen, Germany **10.2016 - 08.2018**
M.Sc., Graduate Training Centre of Neural Information Processing
GPA: 1.1/1.0

Moscow Institute of Physics and Technology, Russia **09.2012 - 08.2016**
B.Sc., Applied Mathematics and Physics

Work Experiences

Postdoc Researcher at University of Amsterdam

Active Representation Learning / Real-to-Sim with Toyota Motors Europe **03.2024 - today**

PhD Researcher at Max Planck Institutes, Tübingen, Germany

Object-centric Representation Learning for RL **11.2022 - 02.2024**

Research Intern at Amazon, Tübingen, Germany

Scaling Object-Centric Learning **05.2022 - 11.2022**

PhD Researcher at Max Planck Institutes, Tübingen, Germany

Object-centric Representation Learning for RL **03.2022 - 05.2022**

Research Intern at Amazon, Tübingen, Germany

Unsupervised Semantic Segmentation **09.2021 - 02.2022**

PhD Researcher at ETH Zürich, Zürich, Switzerland

Object-Centric Representation Learning for RL **09.2020 - 08.2021**

PhD Researcher at Max Planck Institutes, Tübingen, Germany

Object-centric Representation Learning for RL **04.2019 - 08.2020**

Research Intern at Max Planck Institutes, Tübingen, Germany

Transfer Learning for Dynamical Systems **10.2018 - 03.2019**

Publications

Morpheus: Benchmarking Physical Reasoning of Video Generative Models with Real Physical Experiments
Currently under review, ArXiv
Chenyu Zhang*, Daniil Cherniavskii*, **Andrii Zadaianchuk***, Antonios Tragoudaras*, Antonios Vozikis, Thijmen Nijdam, Derck WE Prinzhorn, Mark Bodracska, Nicu Sebe, Efstratios Gavves

SENSEI: Semantic Exploration Guided by Foundation Models to Learn Versatile World Models Cansu Sancaktar*, Christian Gumbsch*, **Andrii Zadaianchuk**, Pavel Kolev, Georg Martius
International Conference on Machine Learning, 2025

Temporally Consistent Object-Centric Learning by Contrasting Slots
Conference on Computer Vision and Pattern Recognition (Oral), 2025
Anna Manasyan, Maximilian Seitzer, Filip Radovic, Georg Martius, **Andrii Zadaianchuk**

CTRL-O: Language-Controllable Object-Centric Visual Representation Learning
Conference on Computer Vision and Pattern Recognition, 2025
Aniket Rajiv Didolkar*, **Andrii Zadaianchuk***†, Rabiul Awal*, Maximilian Seitzer, Efstratios Gavves, Aishwarya Agrawal†

Dream to Manipulate: Compositional World Models Empowering Robot Imitation Learning with Imagination
International Conference on Learning Representations, 2025
Leonardo Barcellona, **Andrii Zadaianchuk**, Davide Allegro, Samuele Papa, Stefano Ghidoni, Efstratios Gavves

On the Transfer of Object-Centric Representation Learning
International Conference on Learning Representations, 2025
Aniket Rajiv Didolkar, **Andrii Zadaianchuk**, Anirudh Goyal, Michael Curtis Mozer, Yoshua Bengio, Georg Martius, Maximilian Seitzer

Object-Centric Learning for Real-World Videos by Predicting Temporal Feature Similarities
Conference on Neural Information Processing Systems, 2024
Andrii Zadaianchuk*, Maximilian Seitzer*, Georg Martius

Unsupervised Semantic Segmentation with Self-supervised Object-centric Representations
International Conference on Learning Representations, 2023 (spotlight presentation)
Andrii Zadaianchuk, Matthäus Kleindessner, Yi Zhu, Francesco Locatello, Thomas Brox

Bridging the Gap to Real World Object-Centric Learning
International Conference on Learning Representations, 2023
Maximilian Seitzer, Max Horn, **Andrii Zadaianchuk**, Dominik Zietlow, Tianjun Xiao, Carl-Johann Simon-Gabriel, Tong He, Zheng Zhang, Bernhard Schölkopf, Thomas Brox, Francesco Locatello

Self-supervised Reinforcement Learning with Independently Controllable Subgoals
Conference on Robot Learning, 2021
Andrii Zadaianchuk, Georg Martius, Fanny Yang

Self-supervised Visual Reinforcement Learning with Object-centric Representations
International Conference on Learning Representations, 2021 (spotlight presentation)
Andrii Zadaianchuk*, Maximilian Seitzer*, Georg Martius

A New Robotic Dataset for Transferable Dynamics Learning
International Conference on Robotics and Automation, 2020
Diego Alejandro Agudelo-España, **Andrii Zadaianchuk**, Philippe Wenk, Aditya Garg, Joel Akpo, Felix Grimminger, Julian Viereck, Maximilien Naveau, Ludovic Righetti, Georg Martius, Andreas Krause, Bernhard Schölkopf, Stefan Bauer, Manuel Wüthrich