Kirill Mazur

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Education

Imperial College London
2021 - present

Ph.D. student in Computer and Robotic Vision

- Dyson Robotics Lab; Supervisor: Andrew J. Davison

Skolkovo Institute of Science and Technology, GPA: 3.83 out of 4.00
2018 - 2020

M.Sc. in Mathematics and Computer Science (with honors)

- Thesis: "Cloud Transformers". Supervisors: Victor Lempitsky and Gonzalo Ferrer
- First year project: "Learnable point cloud descriptors for depth-only odometry and SLAM"

Yandex School of Data Analysis (YSDA), GPA: 4.84 out of 5.00
2016 - 2018

Computer Science (Masters-level degree school organized by Yandex)

Higher School of Economics (HSE), GPA: 9.22 out of 10.0
2014 - 2018

B.Sc. in Mathematics

- Thesis: "On the Families of Quartics and Rational Curves on the Quotient of the Quartic by the Involution"

Publications

SuperPrimitive: Scene Reconstruction at a Primitive Level
Kirill Mazur, Gwangbin Bae, Andrew J. Davison [project page, video, code]

Introduces a new representation for monocular scene reconstruction based on image segments.
(**CVPR**) *IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2024*

Honorable Mention at CVPR Demo Track

Feature-Realistic Neural Fusion for Real-Time, Open Set Scene Understanding
Kirill Mazur, Edgar Sucar, Andrew J. Davison [project page, video]

Presents a new real-time high-dimensional feature fusion technique for open set scene understanding.
(**ICRA**) *IEEE International Conference on Robotics and Automation 2023*

Point-Based Clothing Modeling
Ilya Zakharkin*, Kirill Mazur*, Artur Grigorev, Victor Lempitsky [project page, code]

Presents a new technique for a visual try-on and clothes re-targeting for complex garments.
(**ICCV**) *IEEE/CVF International Conference on Computer Vision 2021*

Cloud Transformers: A Universal Approach To Point Cloud Processing Tasks
Kirill Mazur, Victor Lempitsky [project page, code]

Presents a new layer for 3D point clouds processing that achieved SoTA results on four various tasks.
(**ICCV**) *IEEE/CVF International Conference on Computer Vision 2021*

Experience

Samsung AI Center
Jun. 2019 - Jul. 2021

Research Engineer at Virtual Human Telepresence Lab

- Published 2 first (co-)author papers at a top computer vision venue (ICCV).
- "Cloud Transformers": Research on neural point cloud processing.
- "Point-Based Clothing Modeling": Research on neural 3D clothes modeling and its visual try-on.

Yandex
Jun. 2018 - Sep. 2018

Intern ML Engineer at Computer Vision Lab

- Developed a model for Object Localization which reduced the response time by 75% and doubled a target product metric
- Adapted Tensorflow's object detection project for Yandex Infrastructure

Invited Talks

Rank Symposium: Neural Rendering in Computer Vision
Aug. 2022

"Feature-Realistic SLAM"

Massachusetts Institute of Technology (MIT)
Jun. 2024

"Always-On Single-Image Priors for Spatial AI"

Academic Service

Reviewer
CVPR 2024, ICRA 2023-2024

Imperial College London Spring 2023, Spring 2024
TA at Robotics course

Skolkovo Institute of Science and Technology Spring 2020
TA at Deep Learning course

Higher School of Economics / Yandex School of Data Analysis Sep. 2018 - Dec. 2019
Research seminar curator

Yandex School of Data Analysis (YSDA) Sep. 2018 - Jan. 2019
TA at Algorithms and Data Structures course