





Ivan Skorokhodov

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 universome

Work experience

- Mar 2020–
now **CS PhD student**, *King Abdullah University of Science and Technology*, Thuwal, Saudi Arabia.
- Built several GAN-based models for image/video/3D generation.
 - Took courses on computer graphics, GPU programming and machine learning.
 - Served as a teaching assistant on 3 deep learning courses.
- Feb 2018–
Mar 2020 **Deep Learning Researcher**, *Moscow Institute of Physics and Technology*, Moscow, Russia.
- Developed multi-point optimization strategy to explore loss surfaces of neural networks. It resulted into a [NeurIPS 2019 optimization workshop paper](#).
 - Built a text style transfer model by combining CycleGAN with Transformers. It was presented on art exhibitions in Moscow and Rio de Janeiro.
 - Served as a teaching assistant (+ gave 2 lectures) on the “Theoretical Deep Learning” course.
- Oct 2019–
Dec 2019 **Visiting Student**, *King Abdullah University of Science and Technology*, Thuwal, Saudi Arabia.
- Explored initialization/normalization techniques in the context of zero-shot learning and continual learning (supervised by [prof. Mohamed Elhoseiny](#)). It resulted into an [ICLR 2021 paper](#).
- Mar 2015–
Oct 2016 **Software Engineer**, *Yandex*, Moscow, Russia.
- Developed the offer card for <https://market.yandex.ru> (its front-end part), which has been viewed daily by more than 1 million of people.
 - Performed different infrastructure/devops tasks (deployment, unit/integration/stress tests, etc).
 - Implemented a lot of small product and infrastructure features for <https://market.yandex.ru> in js/node.js/css/xslt.
- Sep 2014–
Mar 2015 **Senior Software Engineer**, *Federal State Statistics Service*, Moscow, Russia.
- Built a web crawler for automatic dictionary generation: it parsed web pages on a specified topic, detected terms and definitions, categorized them, processed and saved into the database.
- Jan 2014–
Sep 2014 **Full-Stack Software Engineer**, *Brainarium*, Moscow, Russia.
- Built a kaggle-like platform with node.js + marionette.js stack and all the required infrastructure.

Education

- Mar 2020–
now **King Abdullah University of Science and Technology**, *Thuwal, Saudi Arabia*.
- Visual Computing Center, PhD student, Computer Science. GPA: 3.92/4.
Supervisor: [prof. Peter Wonka](#).
- Sep 2018–
Jun 2021 **Yandex School of Data Analysis**, *Moscow, Russia*.
- M.S. equivalent, Data Analysis in Applied Sciences. GPA: 4.77/5.
Thesis: Normalization Matters in Zero-Shot Learning.
Supervisor: [prof. Ilya Muchnik](#)
- Sep 2014–
Jul 2016 **Moscow Engineering Physics Institute (MEPhI)**, *Moscow, Russia*.
- M.S., Applied Informatics. GPA: 4.78/5.
Thesis: Product Search Ranking with Neural Networks.
Supervisor: [prof. Anna Tikhomirova](#).
- Sep 2010–
Jul 2014 **Moscow Engineering Physics Institute (MEPhI)**, *Moscow, Russia*.
- B.S. (with honors), Innovative Management. GPA: 4.88/5
Thesis: Software Development Management Systems.
Supervisor: [prof. Igor Prokhorov](#)

Selected publications

- Jun 2022 **EpiGRAF: Rethinking training of 3D GANs**, *preprint*.
Ivan Skorokhodov, Sergey Tulyakov, Yiqun Wang, Peter Wonka
[\[paper\]](#) [\[website\]](#) [\[code\]](#)

- Nov 2021 **StyleGAN-V: A Continuous Video Generator with the Price, Image Quality and Perks of StyleGAN2**, *CVPR 2022*.
Ivan Skorokhodov, Sergey Tulyakov, Mohamed Elhoseiny
[\[paper\]](#) [\[website\]](#) [\[code\]](#)
- Oct 2021 **Aligning Latent and Image Spaces to Connect the Unconnectable**, *ICCV 2021*.
Ivan Skorokhodov, Grigorii Sotnikov, Mohamed Elhoseiny
[\[paper\]](#) [\[website\]](#) [\[code\]](#)
- Jun 2021 **Adversarial Generation of Continuous Images**, *CVPR 2021*.
Ivan Skorokhodov, Savva Ignatyev, Mohamed Elhoseiny
[\[paper\]](#) [\[website\]](#) [\[code\]](#)
- May 2021 **Class Normalization for (Continual?) Zero-Shot Learning**, *ICLR 2021*.
Ivan Skorokhodov, Mohamed Elhoseiny
[\[paper\]](#) [\[website\]](#) [\[code\]](#)
- Dec 2019 **Loss Surface Sightseeing by Multi-Point Optimization**, “Beyond First Order Methods in ML” workshop, *NeurIPS 2019*.
Ivan Skorokhodov, Mikhail Burtsev
[\[paper\]](#) [\[website\]](#) [\[code\]](#)
- Mar 2018 **Semi-Supervised Neural Machine Translation with Language Models**, *AMTA workshop, ACL 2018*.
Ivan Skorokhodov, Anton Rykachevskiy, Dmitry Emelyanenko, Sergey Slotin, Anton Ponkratov
[\[paper\]](#) [\[code\]](#)

Teaching experience

- Fall 2021 **Teaching assistant**, *King Abdullah University of Science and Technology*, Thuwal, Saudi Arabia.
 “Data-Efficient Deep Learning” course, taught by [prof. Mohamed Elhoseiny](#).
- Spring 2021 **Teaching assistant**, *King Abdullah University of Science and Technology*, Thuwal, Saudi Arabia.
 “Deep Generative Models” course, taught by [prof. Mohamed Elhoseiny](#).
- Fall 2020 **Teaching assistant**, *King Abdullah University of Science and Technology*, Thuwal, Saudi Arabia.
 “Data-Efficient Deep Learning” course, taught by [prof. Mohamed Elhoseiny](#).
- Fall 2019 **Teaching assistant**, *Moscow Institute of Physics and Technology*, Moscow, Russia.
 “Theoretical Deep Learning” course (part II), taught by [Evgeniy Golikov](#).
- Spring 2019 **Lecturer/Teaching assistant**, *Moscow Institute of Physics and Technology*, Moscow, Russia.
 “Theoretical Deep Learning” course (part I), taught by [Evgeniy Golikov](#).
 My lecture notes on Information Bottleneck can be viewed [\[here\]](#).

Selected side projects

- Sep 2020– **RtRs** [\[github\]](#).
- Dec 2020 Simple ray tracing and rasterization engine written in [rust](#). There are various features implemented: quadrics/mesh rendering, distributed ray tracing, camera movement, arcball controls, etc.
- Dec 2020 **Gaussian Non-Uniform Interpolation** [\[github\]](#) [\[paper\]](#).
 A CUDA kernel which is able to interpolate points on a non-uniform grid. This is done by representing each point as a 2D gaussian distribution.
- Nov 2018– **Firelab** [\[github\]](#).
- Aug 2020 Python framework for running pytorch experiments. Supports multi-gpu hyperparameters optimization, training class boilerplate, tensorboard logging, etc.
- Oct 2016– **Aladdin** [\[github\]](#).
- Mar 2017 A betting arbitrage bot written in [rust](#).
- May 2016 – **Omniplan Web** [\[github\]](#).
- Aug 2016 A web interface for [omniplan](#) platform written with [react.js](#).

Tech skills

Coding python, rust, CUDA, C++, javascript

ML/DL libs torch, torchvision, tensorflow, sklearn, pandas, numpy

Miscellaneous docker, git, bash, \LaTeX

Hackathons awards

Nov 2018 **Junction**, *SAP incentive award*, [Junction Team](#), Espoo, Finland.

Jun 2018 **BlockchainHack**, *1st place*, Blockchain Institute, Moscow, Russia.

Feb 2018 **Unsupervised Machine Translation**, *2nd place*, [MIPT](#), Dolgoprudny, Russia.

Aug 2017 **FunHack**, *some minor prize*, Science Guide, Moscow, Russia.

Nov 2016 **VK hackathon**, *1st place + people's choice award*, [VK](#), Saint-Petersburg, Russia.

Nov 2016 **BEM hackathon**, *1st place*, [Yandex](#), Moscow, Russia.