

Nikita Durasov

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EDUCATION

École polytechnique fédérale de Lausanne (top 3% of applicants) **Lausanne, Switzerland**
PhD in Computer Sciences (CVLab at EPFL, supervised by Pascal Fua) *Sept. 2019 - Dec. 2024*

Moscow Institute of Physics and Technology (top 5%, Honour degree) **Moscow, Russia**
BS of Applied Mathematics and Physics (major: Data Analysis) *September 2015 - 2019*
GPA: 4.9/5, Thesis: Monocular Depth Estimation (supervisor: Konushin A.)

RESEARCH & WORK EXPERIENCE

Computer Vision Laboratory, EPFL (supervised by Pascal Fua) **Lausanne, Switzerland**
Doctoral Assistant, Uncertainty Estimation project 📄 📄 📄 📄 📄 *September 2019 - Present*

Stack: Python, Keras, Tensorflow, Pytorch, Docker, Kubernetes, GNNs

- developed practical methods for NN uncertainty estimation, active learning, bayesian optimization
- published and presented at top machine learning venues, such as CVPR, ICCV, ICML, TMLR, etc.

NVIDIA, Autonomous Vehicles Group **Zurich, Switzerland / San Jose, USA**
Computer Vision Researcher, Perception Team *February 2024 - Present*

Stack: Python, 3D Detection, Lidar, OpenMM3D, Pytorch, Docker, Kubernetes

- - improving accuracy of modern 3d detector models with efficient data collection / active learning

Apple Development Center **Zurich, Switzerland**
Computer Vision Engineer, Zurich Vision Lab *May - September 2022*

Stack: Python, Keras, Tensorflow, Pytorch, Docker, AWS, GCP, Kubernetes

- - improving robustness of modern detector models with Transformers and attention mechanisms

Amazon Prime Air, Obstacle Detection Lab **Graz, Austria**
Applied Researcher (L5), Robust Stereo 3D Reconstructure project *August - December 2021*

Stack: Python, Keras, Tensorflow, Pytorch, Docker, AWS, C++

- developing approaches for real-time 3D Stereo Reconstruction for edge applications and robotics
- improving robustness of modern neural Depth Estimation architectures through NN's uncertainty

Samsung AI Center (Samsung R&D) **Moscow, Russia**
Deep Learning Researcher, Monocular Depth Estimation (MDP) 📄 *June 2018 - August 2019*

Stack: Python, Pytorch, Keras, Bash, Latex, Android, Java

- designed model for MDP that's 10x faster, more accurate and 20x less memory hungry than SOTA
- responsible for Android demos development (internal Samsung Conferences, ~ 200 participants)
- implemented Pytorch framework for fast NN's prototyping (now used by ~ 10 laboratory members)

Yandex, Computer Vision Service **Moscow, Russia**
Deep Learning Researcher, Optical character recognition project 🌐 *February - May 2018*

Stack: Python, Pytorch, Keras, Tensorflow, C++

- implemented EAST OCR detector with Pytorch and benchmarked performance on internal datasets
- provided end-to-end text detector/recognizer model and validated ideas for model improvements

CHOSEN PUBLICATIONS, FULL LIST HERE

- Durasov Nikita, Oner Doruk, Donier Jonathan, Le Hieu, Fua Pascal (2024)
Enabling Uncertainty Estimation in Iterative Neural Networks (ICML, Vienna)
- Durasov Nikita, Nik Dorndorf, Pascal Fua (2024)
ZigZag: Universal Sampling-free Uncertainty Estimation Through Two-Step Inference (TMLR)
- Durasov Nikita, Bagautdinov Timur, Baque Pierre, Fua Pascal (2021)
Masksembles for Uncertainty Estimation (CVPR, Nashville)