

Andrei Filatov

☎ +7-977-401-41-34 | ✉ filatovandreiv@gmail.com | 📱 [anvilarth](#) | 🌐 [andrei-filatov](#)

Education

MIPT and Skoltech joint programme

Sep. 2021 - present

MSC, DATA SCIENCE TRACK. SUPERVISOR: VICTOR LEMPITSKY

Project: 3D photo inpainting

Moscow Institute of Physics and Technology

Sep. 2017 - Jun 2021

BSC IN APPLIED MATHEMATICS AND PHYSICS (WITH HONOURS)

- School of Applied Mathematics and Informatics
- GPA 4.86/5.0

Work Experience

Visual Intelligence and Learning Lab at EPFL

Mar. 2021 - present

INTERN

I am currently doing an internship in Prof. Amir Zamir's group at EPFL VILAB, where I am working at the intersection of meta-learning, generalisation theory, neural tangent kernel theory.

- Atanov, A., Xu, S., Beker, O., **Filatov, A.**, & Zamir, A. (2022). Simple Control Baselines for Evaluating Transfer Learning. arXiv preprint [arXiv:2202.03365](https://arxiv.org/abs/2202.03365).

Machine Intelligence Laboratory (MIPT)

Jul. 2019 - Dec. 2019

RESEARCHER (COMPUTER VISION, NLP)

- Created solution for a text segmentation task. The solution is based on BERT and improves the quality of segmentation from 60% to 62% (PyTorch project).
- Performed research of SOTA methods in the field of image inpainting. Based on U-Net architecture created model with a lower number of parameters but with the same quality level (TensorFlow project) .

Tinkoff Bank

Feb. 2019 - May. 2019

RISK ANALYST INTERN (CLASSICAL ML)

- For credit scoring task performed exhaustive feature selection and studied various models. After that the optimal model was launched in production, which improved business metrics by 3%

Projects

Fast backtracking for multi-task learning

Sep 2020 - Nov 2020

DIPLOMA THESIS (MULTI-TASK LEARNING, COMPUTER VISION, OPTIMIZATION)

- As a part of the diploma thesis, suggested and studied a new idea of accelerating the line search in case of multi-task learning with just slight overhead (less than 20%) in time budget (PyTorch, NumPy)

Stability of generative adversarial network

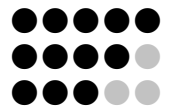
Aug 2020

POSTER AT SMILES 2020 (TOP 10% OF 2000 APPLICANTS)

- Studied the influence of the number of discriminator's training iterations (n_{cr}) on GAN convergence and performance.

Skills

PyTorch, NumPy, Lightning, Optimization, Pandas, Python, Scipy, Sklearn, TensorFlow, LightGBM, Keras, NLTK, OpenCV, Jax/Flax, huggingface, C/C++, Dask, BigARTM,



Data Visualization Matplotlib, TensorBoard, Plotly, Seaborn, Wandb

Programming Git, Linux, Bash, Docker, Kubernetes

Miscellaneous English (Upper-Intermediate), Russian (Native),

Accomplishments

ML Hackathon Mail.ru

Dec 2018

- As a part of ML Hackathon a question-answer matching task was set up. The model based on tf-idf and Bayes classifier has been created. Also, the problem of imbalanced classes was solved. The result of participation is the awardee prize.

Courses

- **Computer vision** course by **Huawei** (NAS, Semi-supervised, Generative models)  
- **NLP** (CRF, LSTM, Transformers, BERT, Industrial systems) joint course of **MSU** and **MIPT** 
- **Deep Learning** (Semantic segmentation, Style transfer, Recurrent models, Reinforcement learning, Generative models) joint course of **MSU** and **MIPT** 
- **Bayesian statistics** course at **MIPT** (EM algorithm, Bayesian regression, Gaussian processes) 
- **ProbAI 2021** (Probabilistic Programming, Variational Inference, ODE & ODE2VAE) 
- **EEML 2021** (Computer Vision, Deep Learning) 