



DANIL SHALAGIN

Machine learning engineer

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Courses

Data Processing: Big Data, Data Bases, High Dimensional Data analyses

Machine Learning: Trees, KNN, logistic regression

Deep Learning: Text processing models (BERT, ELMo, Transformer), GAN, reinforcement learning

Computer Vision: YOLO, RCNN, image preprocessing

Math: Math, Analytic Geometry and Linear Algebra, Probability and Statistics

Toolbox

Linux PostgreSQL LaTeX

Git Docker

Spark Hadoop Apache Airflow

HardSkills

🐍 **Python:** numpy, scipy, pandas, sklearn, pytorch, seaborn

✂ **Other:** C++

Soft Skills

Responsibility,
team worker,
result driven

About me

Machine learning engineer, experienced in Python, ML and data analysis. Highly skilled in developing deep learning models to process images and texts. Excellent time management skills. Passionated about identifying customers' needs and exceeding them. Result driven.

Education

2019 - 2023 **Computer Science**

Innopolis University

Thesis: Local methods with preconditioning for federated learning problems

Work Experience

2021 - 2022 **ML-engineer**

Innopolis University

- Developed an ML model to count the number of animals on images.
- Created simulations (queue model, Customers' moves model and Opinion model). Applied machine learning models to predict parameters of simulation
- Retail data processing
- Created database structure. Applied Apache Airflow to transform data

Projects

Federated Learning

2023 🔄

- Created Federated learning model (on PyTorch) based on models ResNet, VGG, Logistic regression which classify images from CIFAR-50 dataset and users' dataset and use preconditioners (Adam).

- Implemented model satisfy theoretical definition and conditions of Federated learning.

* Currently I am working on Federated learning for ResNet and VGG

* I have provided accuracy and loss plots for logistic regression

• **YOLO based image search**

2022 🔄

- Applied and adopted YOLO deep learning model to search animals on picture. After tuning and training our model had accuracy 0.7, recall 0.8 and precision 0.9.

• **CNN for iris center selection**

2021 🔄

- Pre-processed given faces dataset such that it contain only images of eyes on gray scale.

- Built CNN model to predict center of iris

Other

• **language**, English (Upper Intermediate)