

# ALEKSEI SHABANOV

## Machine Learning Engineer

📍 Worldwide    ✉ shabanoff.aleksei@gmail.com    📧 @lexibender    📧 alekseysh

MLE with 7+ years of experience in industry, open-source, teaching, and academia. Fluent in English.

## WORK EXPERIENCE

### Machine Learning Engineer

#### Constructor.io Corporation

📅 June 2023 – November 2023    📍 Remote

- **In the Attribute Enrichment Team.** Enhanced the quality of existing methods that enrich product descriptions. Developed and productionized a metrics pipeline for these methods.
- **In the Search Team.** Researched thresholding methods for retrieval.

### Staff Data Scientist / Team Lead

#### NewYorker GmbH

📅 March 2021 – June 2023    📍 Berlin, Germany

I led a team working on **vector representation** for the images of the company's product catalog. I was responsible for research and development and also communicated with other teams and stakeholders to identify the best use of our model. Ultimately, I facilitated its exposure as an internal API.

- Thanks to this API our colleagues from other DS projects boosted their business metrics.
- I also released the training pipeline as an open-source library and promoted it at meetups to improve our employer branding.

### Applied Data Scientist

#### Neuromation Inc.

📅 March 2018 – October 2020

I completed numerous projects working as a consultant, e.g.:

- Built a **Computer Vision** system that saved doctors' time by verifying if a box with surgical tools was correctly completed. The challenge lay in solving the problem without retraining the model for new tools, using a few-shot learning approach.
- Developed an **NLP** tool to assist operators in extracting useful information from emails. This involved the entire project lifecycle from client communication and setting up the data labeling process to containerization and deploying the trained model.

### Junior Quant Analyst

#### 3Red Trading, LLC

📅 June 2016 – March 2017

Based on statistical anomalies, I recognized traders who used automatic tools so we can predict their actions.

## SKILLS AND ABILITIES

Computer Vision   NLP   Tabular   Metric Learning   Tracking  
Python   PyTorch   OpenCV   Pandas   Sklearn   Databricks  
Linux   git   CI/CD   Docker   Kubernetes   SQL

## SIDE PROJECTS

### Open-Source

#### OpenMetricLearning, author

📅 2022 – present

OML is a framework designed for training and validating vector representation models. I place special emphasis on maintaining well-written documentation and ensuring comprehensive test coverage.

#### Catalyst, active contributor

📅 2020 – 2021

I've made a metric learning module for this once-popular analogue of PyTorch Lightning.

### Teaching

#### Teaching at Harbour University

📅 January 2024    📍 Bangkok, Thailand

Neural Networks and Computer Vision, link.

#### Supervising students from HSE

📅 2023    📍 Remote

Student graduation projects: 1, 2.

#### STIR: Siamese Transformer for Image Retrieval Postprocessing, preprint

#### Challenge by Uber: 2nd out of 100+ teams

#### Kaggle Competitions Expert

#### Lecture on Re-Id at JetBrains CS Center

## EDUCATION

### PhD Candidate

#### Steklov Mathematical Institute

📅 2019 – 2024

### MSc in Applied Math and Physics

#### Saint-Petersburg State University

📅 2016 – 2019

### BSc in Physics

#### Saint-Petersburg State University

📅 2012 – 2016