Alenicheva **Alisa**
SKOLTECH STUDENT

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Sum**mary**

Current Master Student in Skoltech, Moscow, Russia.

Areas of science interests - Machine Learning in Drug Discovery and Natural Language Processing.

Edu**cation**

MIPT (Moscow Institute of Physics and Technologies)   *Moscow, Russia*

B.S. IN APPLIED MATHEMATICS AND PHYSICS

Thesis: Mathematical model of light distribution inside layer of microalgae liquid   *Sep. 2014 - Exp. Aug. 2018*
- Got an Abramov scholarship which is given for academic achievements
- Was a class leader for 4 years
- Graduated with Honors

Skoltech (Skolkovo Institute of Science and Technology)   *Moscow, Russia*

M.S. IN INFORMATION TECHNOLOGY AND ENGINEERING

Projects: *Sep. 2018 - PRESENT*
- **3D Segment Mapping using Data-Driven Descriptors**
  Labelling dataset of 3D pointclouds from KITTI dataset, extraction feature vectors from 3D pointclouds via autoencoder and classification of objects based on these vectors.
- **On GANs and GMMs**
  Comparing the perfomance of SOTA GANs models and Gaussian Mixtures in face generation task.
- <u>Thesis:</u> **Predicting the acute toxicity of organic molecules using 3D-convolutional neural networks**
  Transformation of SMILES organic molecules notation into 3D cube; reducing sparsity via convolution with specific kernels; data augmentation with molecule conformers; predict toxicity via 3D-CNN architecture: multi-label classification task (Tox21 dataset), multi-label regression task.

Wor**k Experience**

National Research Center «Kurchatov Institute»

Biotechnology Department   *Moscow, Russia*

RESEARCH ASSISTANT   *Oct. 2014 - Jun. 2019*
- Implemented software for reading and collecting data from sensors system of Bioreactor with LabView development environment
- Constructed the Arduino-based control unit of Bioreactor lighting
- Created a mathematical model of light distribution inside the Bioreactors with different geometries

Mobile TeleSystems (MTS)

Artificial Intelligence Department   *Moscow, Russia*

TRAINEE   *Jun. 2019 - Sep. 2019*
- Entity Linking for Russian language
- Collected dataset for Entity Disambiguation in Russian language based on Wikipedia dump
- Created prototype of software marking entities in a piece of text

PJSC Sberbank

Basics of Machine learning for top managers course   *Moscow, Russia*

MENTOR   *Oct. 2019*
- Teaching basics of regression and cross-validation implemented in Python
- Training classification tasks and specific quality metrics

Hon**ors**

2019	**1st Place**, **Unilever Chain Reaction Hack** - Algorithm and UI of application for 3D packing problem of Unilever's products	*Moscow, Russia*
2019	**1st Place**, **The Arctic Circle Hakathon** - Android application aiming to make inhabitants of cold regions to live a healthy life	*Salekhard, Russia*

Skills

Programming languages	• Python (Advanced): Pytorch, Scikit-learn, Pandas, Matplotlib, Numpy, MPI4py • C (Basic) • LaTeX (Basic) • PL/SQL (Basic) • Matlab (Basic)
Relevant Coursework (Skoltech)	• Machine Learning • Natural Language Modelling and Processing • Deep Learning • Bayesian Methods of Machine Learning
Languages	• Russian (Native) • English (Advanced)
Design	• Adobe Photoshop • Adobe Illustrator • InkScape • Figma
Tools	• Linux • Git • ssh

Hobbies and Interests

In my spare time I enjoy participating in hackathons. It gives me an opportunity to meet specialists from different areas of my work interests, and also get experience of team collaboration for creating projects aiming to solve business or social problems with additional motivation given by the spirit of competitiveness. At the same time each project provides various challenges not only for my professional skills of computer scientist, but also for my admiration of painting and design.