

# STANISLAV BELIAEV

## Machine Learning Engineer/Researcher

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## RELEVANT EXPERIENCE

### Deep Learning Research Intern

#### Nvidia

Dec 2019 – Present Santa Clara, CA

- Working as part of the **Deep Learning Applications** team.



### Software Engineer Intern

#### Google

Aug. 2019 – Dec. 2019 Mountain View, CA

- Working as part of the Google Accelerated Science (GAS) team in **Google Research**.
- Exploring new approaches for **Semi-Supervised Classification** and **Representation Learning** tasks run on the internal dataset of biological samples.



### Deep Learning Research Intern

#### Nvidia

May 2019 – Aug. 2019 Santa Clara, CA

- Working as part of the **Deep Learning Applications** team.
- Developed high-level **Deep Learning framework**, built on top of **PyTorch** with seamless multi-GPU support, mixed precision mode and whole bunch of other features (see Paper 2 and Project 2).
- Developed and implemented a novel model for **Speech Recognition**, which incorporates the usage of prior knowledge for speeding-up train time and boosting accuracy (see Paper 1).



### Machine Learning Engineer

#### Neuromation

Mar. 2018 – Feb. 2019 Saint Petersburg, RU

- Contributed major part in developing a framework for **Domain Adaptation** task and proposed new extensions to existing methods, resulting in a published paper (see Paper 3).
- Took part in various research and product-oriented projects, including: **Drug Discovery** (with **Insilico**, see Paper 4 and Project 1), **Domain Adaptation**, **Face Recognition** and **Object Detection** of garbage for pollution reducing.



## PAPERS

- QuartzNet: Deep Automatic Speech Recognition with 1D Time-Channel Separable Convolutions**. Pre-print, 2019
- NeMo: a toolkit for building AI applications using Neural Modules**. Published, 2019
- Beliaev et. al. **Unsupervised Domain Adaptation: a Comparative Study and Source Entropy Maximization for Reverse Gradient Models**. Pre-print, 2018
- Molecular Sets (MOSES): A benchmarking platform for molecular generation models**. Published, 2018

## SKILLS

PLs  
Technologies  
Interests  
Papers notes  
Languages

Python, C/C++, Bash, Java, Kotlin, Scala, R, Ocaml, Haskell  
Git, Linux, SQL, GDB, **Docker**, **PyTorch**, **Tensorflow**, **Spark**  
**Computer Vision**, **NLP**, **Generative Models**, **RL**, **Big Data**  
<https://github.com/stasbel/papers>  
Russian (Native), **English (Advanced)**

## EDUCATION

### Master of Machine Learning and Data Analysis

#### National Research University Higher School of Economics

Sep. 2018 – Present

### Bachelor of Computer Science

#### Saint Petersburg National Research Academic University

Sep. 2014 – Jun. 2018

### Irregular Student

#### Yandex School of Data Science

Sep. 2018 - Present

### Attender

#### Summer School on Bayesian Methods in Deep Learning by HSE's Research Group

Aug. 2017, Aug. 2018



## NOTABLE PROJECTS

- Molecular Sets (MOSES): A benchmarking platform for molecular generation models**
  - <https://github.com/molecularsets/moses>  
250+ stars, 65+ forks
  - Implemented several popular **molecular generation** models, along with full train/test pipeline and overall project structure.
- Neural Modules (NeMo): A toolkit for conversational AI**
  - <https://github.com/NVIDIA/NeMo>  
880+ stars, 90+ forks
  - Implemented bunch of features, couple of **ASR** models and developed overall project structure.
- [WIP] Gadget**
  - <https://github.com/stasbel/gadget>  
**PyPi-package** for Python3.5+
  - Tool for configs parsing with getters on steroids and nice interface for readability

## EVENTS

Hackathons won:

EPAM DS Hackaton  
AlphaBank Hackaton

AiHack Hackaton  
MunHack Hackaton

## TALKS

Presentations given:

Stepik Task  
Stepik Result  
IR Project  
Bachelor Thesis

Text generation  
SDVAE for structures  
Deep Image Prior  
DNN with Box Convs