

# Dmitry Penzar

## Bioinformatician, ML enthusiast, teacher

Last update: March 11, 2021

The online version is available at

<https://dmitrypenzar1996.github.io/resume>

### Residence

Moscow

### Github

[github](#)

### Email

[dmitrypenzar1996@gmail.com](mailto:dmitrypenzar1996@gmail.com)

Python	+++++	R	+++++	C/C++	+++	Golang	++	Statistics	+++++	Classical ML	+++++
Deep learning	++++	Algorithms	+++++	Molecular biology	+++	Bioinformatics	+++	English (speaking)	+++	English (technical literature)	+++++

ML enthusiast

## Professional Experience

### Department of Computational Systems Biology, VIGG RAN

June 2017 - Current

Advisor: Dr. Ivan Kulakovskiy.

Classical ML and Deep Neural Networks application for the regulatory mutations effect

ML biology healthcare

### Belozersky Institute of Physico-Chemical Biology, Department of Mathematical Methods in Biology

September 2016 - June 2017

Advisor: S.A. Spirin

We developed a novel program, named PQ, for reconstructing protein and nucleic acid phylogenies following a new character-based principle.

C/C++ phylogeny software development

### Internship in Netherlands, LUMC, Molecular Epidemiology, Department of Medical Statistics and Bioinformatics

July 2016

Advisor: Dr. Szymon Kielbasa

R-Shiny based NGS data quality control and outliers detection toolkit Zeeuw

R NGS software development

### Technosphere, Mail.Ru Group

October 2016 - December 2017

Intense two-year program by a leading Russian IT company. Within the program, I participated in different ML Kaggle competitions, acquired a huge experience in ML and software development, deepened knowledge of C/C++. I quit from the third semester of the program due to job offer from Insilico Medicine company

R NGS software development

Developer in startup curated by AIAR Labs Inc, department of machine learning

August 2017 - October 2017

NDA( : ( )

ML DNN software development

Developer in InSilico Medicine, department of machine learning

November 2017 - August 2018

I've been working on generating new drugs using deep neural networks

ML DNN drug design software development

## Education

Lomonosov Moscow State University, Faculty of Bioengineering and Bioinformatics. 2013 - 2019. specialist degree, GPA - 5/5

## Publications

Insights gained from a comprehensive all-against-all transcription factor binding motif benchmarking study

epigenomics visualization regulatory regions

The species Severe acute respiratory syndrome-related coronavirus: classifying 2019-nCoV and naming it SARS-CoV-2

virology R software development

H3K4me3, H3K9ac, H3K27ac, H3K27me3 and H3K9me3 Histone Tags Suggest Distinct Regulatory Evolution of Open and Condensed Chromatin Landmarks

epigenomics

Integration of Multiple Epigenomic Marks Improves Prediction of Variant Impact in Saturation Mutagenesis Reporter Assayheader:

epigenomics machine learning regulatory regions

Retroelement—Linked Transcription Factor Binding Patterns Point to

## Quickly Developing Molecular Pathways in Human Evolution<Paste>

epigenomics visualization regulatory regions

## What Do Neighbors Tell About You: The Local Context of Cis-Regulatory Modules Complicates Prediction of Regulatory Variants

machine learning data leakage regulatory regions

## PQ, a new program for phylogeny reconstruction

phylogeny

## Profiling of Human Molecular Pathways Affected by Retrotransposons at the Level of Regulation by Transcription Factor Proteins

epigenomics visualization regulatory regions

## Additional Experience

### Additional courses

I've attend a huge variety of additional courses, including: 1. Categorical grammar 2. Neuroscience and neuromarketing 3. Macromolecular modeling 4. Pattern recognition 5. Mathematical models in biology 6. Mathematical linguistics

economics linguistics mathematics

### Teacher

I've been trying to take part in teaching since I was a third-year student. Firstly, I've started as teacher assistant, then – one the course authors, now I'm continue to teach different courses, including those led by me.

Short list of courses I'm taking part in:

1. Algorithms
2. Machine learning in biology (the course led by me)
3. Introduction to Python
4. Advanced Python
5. Deep learning in science

teaching communication team leader