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

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

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Advisor: Dr. Ivan Kulakovskiy.
Classical ML and Deep Neural Networks application for the regulatory mutations effect
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`ML` `biology` `healthcare`

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

September 2016 - June 2017

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Advisor: S.A. Spirin
We developed a novel program, named PQ, for reconstructing protein and nucleic acid
phylogenies following a new character-based principle.
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`C/C++` `phylogeny` `software development`

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

July 2016

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Advisor: Dr. Szymon Kielbasa
R-Shiny based NGS data quality control and outliers detection toolkit Zeeuw
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`R` `NGS` `software development`

Technosphere, Mail.Ru Group

October 2016 - December 2017

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Intense two-year program by a leading Russian IT company. Within the program, I participated
in differeent ML Kaggle compeetitions, aquired a huge experience in ML and software
development, deepened knowledge of C/C++. I quited from the third semester of the program due
to job offer from Insilico Medicine company
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`R` `NGS` `software development`

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

August 2017 - October 2017

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NDA(:( )
```

`ML` `DNN` `software development`

Developer in InSilico Medicine, department of machine learning

November 2017 - August 2018

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I've been working on generating new drugs using deep neural networks
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`ML` `DNN` `drug design` `software development`

Education

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

VIGG, Department of Computational Systems Biology, 2019-2023, phd degree

Publications

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

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`epigenomics` `visualization` `regulatory regions`

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

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`virology` `R` `software development`

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

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```

`epigenomics`

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

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```

`epigenomics` `machine learning` `regulatory regions`

Retroelement—Linked Transcription Factor Binding Patterns Point to Quickly Developing Molecular Pathways in Human Evolution<Paste>

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epigenomics   visualization   regulatory regions

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

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machine learning   data leakage   regulatory regions

PQ, a new program for phylogeny reconstruction

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phylogeny

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

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epigenomics   visualization   regulatory regions

Additional Experience

Additional courses

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

ecomomics   linguistics   mathematics

Teacher

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  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