

# Sergey Slotin

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## EXPERIENCE

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|-----------------------------------|--|
| April '19 –<br><i>present</i>     | <b>YANDEX</b><br><i>Machine Learning Engineer, Search</i><br>– Working on image search quality. Nothing more to say here yet.<br>– Stack: C++, Python, TensorFlow, CatBoost  |
| July '18 –<br>April '19           | <b>TINKOFF</b><br><i>Deep Learning Engineer, NLP and ASR</i><br>– Led the development of a retrieval-based general conversational chatbot.<br>– Developed a novel transfer learning approach for intent classification.<br>– Worked on language modelling and ensemble methods for speech recognition.<br>– Optimized training and inference of machine learning models (mostly neural networks).<br>– Stack: Python, C++, PyTorch, TensorFlow |
| September '18 –<br><i>present</i> | <b>TINKOFF GENERATION</b><br><i>Teacher, Deep Learning and Algorithms</i><br>– Teaching and writing materials for 4 CS/ML courses for high school and undergrad students.<br>– Coordinating work of other teachers.<br>– The algorithms department currently has ~120 students, ~30 of whom are ROI finalists.   |
| September '17 –<br>May '18        | <b>1C EDUCATIONAL CENTER</b><br><i>Teacher, Algorithms</i><br>– Mentored a group of ~15 gifted high school kids.<br>– 5 of my students qualified for the National Olympiad, 3 returned with medals.  |

## TECH STACK

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- Expert: Python, C++, Linux (Debian family), PyTorch, SciPy, NumPy, pandas, NLTK, matplotlib, Sage, Sacred, Docker, git, HTML, CSS,  $\LaTeX$
- Intermediate: C, Golang, bash, Cython, pybind11, CUDA, x86 assembly, SSE, TensorFlow, Keras, Horovod, CatBoost, asyncio, PostgreSQL, MongoDB, Subversion
- Basic: Haskell, MPI, OpenCL, OpenMP, Numba, Eigen, Bokeh, XGBoost, LightGBM, k8s, AllenNLP, SpaCy, bs4, Selenium, JavaScript, jQuery, Django, Flask, Jinja2, PHP

## DOMAIN KNOWLEDGE

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- Expert: deep learning, natural language processing, information retrieval, language modelling, machine translation, speech recognition, transfer and multi-task learning, computational graphs, computer science
- Intermediate: speech synthesis, reinforcement learning, generative modelling, Bayesian deep learning, game theory, decision trees, data visualization, compilers, parallel computing, GPU programming
- Basic: computer vision, numerical linear algebra, functional programming, low-level programming, linguistics, web development
- Languages: Russian (native), English (fluent, C1), German (basic, A2)

## COMPETITIVE PROGRAMMING

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- Russian Olympiad in Informatics: 65th in '16 and 25th in '17.
- Moscow Open Olympiad in Informatics: 58th in '16 and 2-4th in '17.
- Achieved CodeForces<sup>1</sup> rating of **2315** while in high school, which is 99th percentile and **roughly equivalent** to IOI high silver.
- Occasionally contributing problems for CodeForces rounds and minor local contests.

<sup>1</sup>Popular competitive programming website. [codeforces.com/profile/sslotin](https://codeforces.com/profile/sslotin)

## EDUCATION

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|-------------------------|--|
| 2019—...                | Yandex School of Data Analysis<br><i>Machine Learning Developer</i>                      |
| 2019—2021<br>(expected) | Moscow Aviation Institute<br><i>Applied Mathematics and Informatics</i>                  |
| 2017—2019               | Moscow Institute of Physics and Technology<br><i>Applied Mathematics and Informatics</i> |
| 2015—2017               | Moscow School 179 <sup>2</sup><br><i>Engineering</i>                                     |

## WORKSHOPS

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|--------------|---|
| August '18   | <a href="#">DeepBayes</a><br><i>School on Bayesian deep learning</i>            |
| February '18 | <a href="#">DeepHack.Babel</a><br><i>Workshop on neural machine translation</i> |

## WRITING

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|--------------------------------|--|
| March '18                      | <a href="#">Semi-Supervised Neural Machine Translation with Language Models</a><br>Association for Machine Translation in the Americas 2018, LoResMT workshop                  |
| August '17 —<br><i>present</i> | <a href="#">Tutorial series on algorithms</a> (in Russian)<br>I publish my lecture notes on computer science here.<br>It is 353547 characters long when converted to markdown. |

## TEACHING

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- *Introduction to Algorithms*, IC Educational Center; fall '17, spring '18
- *Advanced Algorithms*, IC Educational Center; fall '17, spring '18
- *Algorithms*, Tinkoff Generation; fall '18, **spring '19**
- *Deep Learning*, Tinkoff Generation; fall '18, **spring '19**
- *Machine Learning*, Tinkoff Generation; fall '18, **spring '19**
- *Machine Learning in Dialogue Systems*, Tinkoff Fintech; fall '18, **spring '19**
- *Deep Learning*, UniverSum; July '18
- *Algorithms*, Moscow Region ROI training camp; February '18
- *Guest lecture on GANs*, GoTo School; August '18

## MISC.

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|--------------------------------|---|
| February '18 —<br>November '18 | <a href="#">MIPT DL Club</a><br><i>Co-organizer</i><br>Student-run reading club on deep learning  |
| February '18                   | 2nd place on <a href="#">DeepHack.Babel</a><br>Hackathon on machine translation   |
| March '17 —<br><i>present</i>  | <a href="#">Algorithms implementations library</a><br>Minimalistic C++ implementations of ~30 algorithms frequently used in competitive programming.<br>(This is not representative of how I write code for real projects.) |

Hobbies / irrelevant skills: chess, poker, board games, computer strategy games, cinema, design, music, guitar, piano, quantum computing, computer algebra

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<sup>2</sup>Was named the best school of Moscow on my graduation year.