



## Rudenko Varvara

Student of MIPT

### Skills

**LaTeX** 2+ yrs.



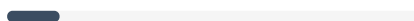
**SQL** 1+ yrs.



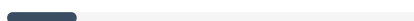
**Python** 2+ yrs.



**C** 2+ yrs.



**C++** 2+ yrs.



**English** B1



**French** A2



## Biography

Hello, in this resume I want to introduce myself and show the reasons why you can choose me for further work and training. I know how to learn and am willing to spend time developing myself in the areas that interest me. I hope that after graduating from the university, the acquired "knowledge base" will help me get not only a well-paid job, but also an interesting one)))

## Additional education

### Student

08/2020

Sirius University of Science and Technology in the program "Modern methods of information theory, optimization and management" with the direction "Sampling, management and optimization"

An educational trip in which the following materials were studied: Monte Carlo methods, lectures on optimization and control theory, and an introduction to reinforcement learning. A personal project has been prepared, under the guidance of Alexey Naumov.

### Student

07/2020 - 09/2020

"White Belt C++", Yandex

Basics of programming in C++, familiarity with the language, to perform basic tasks and projects.

### Student

2021

"SQL for Data Science", University of California, Davis

The course on the theoretical component of the programming language was attended, the classical set of functions necessary for elementary queries in Data Science was studied.

### Student

2021

"Fundamentals of Reinforcement Learning", The Alberta Institute & Alberta Machine Intelligence Institute

The basic theory in the field of Machine learning is studied, with a deepening in reinforcement learning and an analysis of the main tasks and problems. The problem of the "multi-armed bandit" is studied in depth outside the course.

### Student

03/2021 - today

"Data Analysis in the Industry", Tinkoff

Introduction to the work of data analysts in the company, a conversation with employees. Attended a course of lectures on Data analysis: A B-tests, Logistic regression, Random forest, and so on. Tasks designed to help you understand the topic and deal with the tasks that occur in the routine work of the analyst were completed.

## Projects

- Importance Sampling and control variates

There exist many problems in science and engineering whose exact solution either does not exist or is difficult to find. For the solutions of those problems, one has to resort to approximate methods. The Variational Monte Carlo (VMC) technique is relatively insensitive to the size of the system, it can be applied to large systems where some other methods are computationally not feasible.

## Education

09/2019 - today

**Faculty of Radio Engineering and Cybernetics**

Moscow Institute of Physics and Technology

## Interests

- ▶ Singing
- ▶ Gymnastics
- ▶ Cooking
- ▶ Travel

## Contact

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- 🌐 [github.com/Rudenshtok](https://github.com/Rudenshtok)

- Gaussian Process Optimization in the Bandit Setting: No Regret and Experimental Design

Analysis of the article and work on it: Many applications require optimizing an unknown, noisy function that is expensive to evaluate. We formalize this task as a multi-armed bandit problem, where the payoff function is either sampled from a Gaussian process (GP) or has low RKHS norm. We resolve the important open problem of deriving regret bounds for this setting, which imply novel convergence rates for GP optimization. We analyze GP-UCB, an intuitive upper-confidence based algorithm, and bound its cumulative regret in terms of maximal information gain, establishing a novel connection between GP optimization and experimental design.

## Recommendation

Уважаемые коллеги,

Я с удовольствием рекомендую Варвару Руденко на кафедру интеллектуального анализа данных. Варвара в августе 2020 года проходила обучение в "Научно-технологическом университете «Сириус» по программе "Современные методы теории информации, оптимизации и управления" с направлением «Сэмплирование, управление и оптимизация».

Варвара Руденко продемонстрировала способность быстро разбираться в новом материале. В сжатые сроки проектной смены она успешно изучила с нуля язык программирования Python, необходимый математический аппарат теории вероятностей и методов Монте-Карло. Под моим руководством Варвара успешно выполнила и защитила персональный проект «Importance sampling and control variates». За время обучения и работы над проектом Варвара зарекомендовала себя с самой лучшей стороны, продемонстрировав трудолюбие и заинтересованность. Навыки, приобретенные во время работы над проектом, несомненно были бы полезны при дальнейшей научной работе на кафедре.

С уважением,

Наумов Алексей Александрович,

Заведующий Международной лабораторией стохастических алгоритмов и анализа многомерных данных НИУ ВШЭ,  
старший научный сотрудник Сектора 7 ИППИ РАН

