# Igor Timofeev

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## Employement History:

- march 2021 - august 2021, Yandex: Product analyst for Yandex Search. Improving offline Entity Search metrics, analyzing growth points and customer preferences.

- august 2020 - february 2021, IE Shapiro Leonid Lvovich: Option pricing model development using machine learning and Python. Fitting asset prices with options data. FFT and Lewis method was used for option prices calculation and asset price was modeled by tempered stable distribution.

- October 2019 - July 2020, Special Technology Center (STC): Video Object Detection and Online Tracking with YOLO from AlexeyAB/darknet open source repository (DarkNet extension), Kalman filter and Hungarian algorithm using C/C++. Python for parsing the VisDrone dataset and for testing. Also used by OpenCV, DVC, CUDA.

## Knowledge and skills:

- Machine Learning: PyTorch, scikit-learn.

- Python, C/C++.

- Calculus, Algebra, Numerical analysis, Probability theory and Mathematical Statistics, Algorithms and Data Structures, Molecular Biology.

- Data Analysis: SQL, Statistical Hypothesis Testing.

## Scientific Interests:

- Mechanism of brain aging and rejuvenation: Connections between the different hallmarks of aging, works by Jan Hoeijmakers: DNA damage, Aging and Cancer, Model transcription stress in aging, and works by David Sinclar: Reprogramming to recover youthful epigenetic information and restore vision by Yamanaka factors.

- Building aging clocks to evaluate biological age and longevity interventions.

## First Education:

St. Petersburg State University,
Department of Mathematics and Mechanics,
Master of Astronomy,
Sep, 2014 - June, 2019.

**Degree Thesis:**

> Topic: "The Effect of Close Approach to a Planet on the Rotation of an Asteroid".
> In this work I have developed a program in C++ using Boost library and numerical methods for calculating an asteroid trajectory in the Solar system. ⭘

## Second Education:

St. Petersburg State University,
Department of Mathematics and Mechanics,
Master of Computational Biology and Bioinformatics,
Sep, 2021 - June, 2023.

## Additional education and competitions:

- 4th place in SignalNeuroHack hackathon with Huawei research project. ⭘

- Bioinformatics Summer School 2019 on the topic "Bioinformatics in Research of Aging and Biological Development" and project based on the paper "Widespread Proteome Remodeling and Aggregation in Aging C. elegans". ⭘

- Completed the course "Deep Learning на пальцах (Put Simply)" by Computer Science Center and Novosibirsk State University. ⭘ Also Reinforcement Learning tasks using DQN algorithm and Policy Gradient. ⭘

- Specialization "Machine Learning and Data Analysis" by Yandex on Coursera. ⭘

- Stepik courses certificates.