# Timur Kharisov

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Residence: Paris, France
Date of birth: March 26, 2002
Citizenship: Russian Federation

#### **EDUCATION**

Paris-Saclay University - Graduate School of Mathematics §

Orsay, France

M2 (M.Sc.) in Optimisation at the Mathematics and Applications program, GPA: exp. 16-17/20

Sep 2024-Sep 2025

Yandex School of Data Analysis 😵

Remote

AI online program (non-degree) comprising Master's in Data Science courses.

Sep 2022–May 2025

Moscow Institute of Physics and Technology #1 technical school in Russia B.S. in Computer Science and Applied Mathematics, GPA: 9.11/10 (4.91/5.0), transcript

Moscow, Russia

B.S. in Computer Science and Applied Mathematics, GPA: 9.11/10 (4.91/5.0), <u>transcript</u> Sep 2020—Jun 2024

Thesis: "Optimization of Communication Overhead in Federated Learning for Machine Learning Models"

supervised by Prof. Peter Richtárik (final score by the committee: 10/10).

#### EXPERIENCE

## Research Intern (M2 stage)

Palaiseau (Île-de-France), France

CREST (Center for Research in Economics and Statistics)

May 2025-Sep 2025

- Working on the data markets project in the <u>Fairplay team</u>, supervised by <u>Patrick Loiseau</u> and <u>Nicolas Gast</u>.

#### Visiting Student Researcher

Thuwal, Saudi Arabia

King Abdullah University of Science and Technology

Oct 2023-Mar 2024

- Working in the Optimisation and Machine Learning Research Group supervised by <u>Peter Richtarik</u>.
- Projects on Federated Learning Optimisation resulted in an oral presentation at FL@FM NeurIPS 2024.
- Skills acquired: Theoretical and Experimental research in Federated Learning, Optimisation, and Machine Learning.

## Quantitative Research Intern

Yerevan, Armenia

WorldQuant LLC

Jul 2023-Sep 2023

- Spearheaded a project focused on enhancing the speed and performance of a trading algorithm.
- Skills acquired: Applications of Optimisation and Linear Algebra, C++ Development, Quantitative Finance.

#### Machine Learning Engineering Intern

Moscow, Russia

Yandex LLC

Jul 2022-Oct 2022

- Improved the *End-to-end* <u>Alice</u> virtual assistant search app quality by **0.4%** through optimizations in the ML models training pipeline. Contributed to the development of Alice for the new Yandex Station Duo Max device.
- Skills acquired: Applications of NLP and Machine Learning, Experimental Research, Python and C++ Development.

# ACHIEVEMENTS AND SCHOLARSHIPS

• Excellence Undergraduate and Graduate Scholarships

Jan 2021–Jun 2025

Sophie Germain Master Scholarship (2024-2025) -  $\underline{\textit{Highly competitive scholarship for top students in Mathematics}}$ . Academic Track of Tinkoff Scholarship (2023-2024) -

Scholarship awarded for students demonstrating outstanding academic performance. (top 200 of 13000 applicants)
Government Academic Excellence Scholarship (2023-2024) - "Exceptional achievements in research work".

Abramov Scholarship for Academic Excellence (2021-2023) - Top 5% students of MIPT university.

• Data Engineering "Hack & Change" Hackathon - <u>Absolute Winner</u> (top 1 of 60 teams)
Led team of 5 people for implementing efficient Mobile Services users data aggregation application.

Nov 2021

• Final of All-Russian National Olympiad in Mathematics

Apr 2020

Most prestigious national competition in Mathematics. - <u>Prize Winner</u> (top 100 of 40000 participants)

#### SKILLS

- Problem Solving: Competitive (Olympiad) Mathematics, Competitive Programming.
- Mathematics: Advanced Linear Algebra, Advanced Calculus, Probability Theory, Differential Equations, Stochastic Analysis, Statistics, Optimization, Game Theory, Discrete Mathematics, Learning Theory (ML), Complexity Theory.
- Software Engineering: C++, Python, C, ASM, MapReduce, Databases (SQL, Apache Spark/Hive, Redis), PyTorch/JAX/HuggingFace, Docker, Linux, Git, CI&CD, Software Design Patterns, Algorithms and Data Structures.
- Research Skills: LATEX, Experiment Setup, Research Paper Writing, Literature Review, Conference Submission.
- Languages: English (C1, <u>IELTS Academic Band 8</u>, <u>Public Speaking</u>), Russian (Native), French (A1)