

# Andrei Panferov

ML RESEARCHER

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## Experience

### KAUST, Optimization and Machine Learning Lab

RESEARCH INTERN

[Saudi Arabia](#)

July 2023 - September 2023

- Conducted research under the supervision of Prof. Peter Richtarik
- Derived theory and ran experiments on **Distributed Optimization**, focusing on **Communication Compression**

### Eqvilent (HFT fund)

SOFTWARE ENGINEER

[Remote](#)

July 2022 - May 2023

### Yandex

ML ENGINEER INTERN (NLP)

[Moscow, Russia](#)

March 2022 - July 2022

- Refactored and optimized an **LLM inference framework** enabling abstract *tabular data* insertion for efficient **Map-Reduce** inference
- Increased test coverage from **0 to 85%** through rigorous unit testing
- Took part in developing a *universal LLM benchmarking solution* adapting 2 datasets for it

### Terra Quantum AG

RESEARCHER

[Moscow, Russia](#)

July 2020 - July 2022

- Designed a framework for quantum circuit optimization using
- Developed an NMR spectra analysis library for quantum computations
- Optimized Large Language Models for chat assistant applications, reducing latency by 30%

## Awards

### International Physics Olympiad

GOLD MEDAL

[Israel](#)

Summer 2019

## Education

### Moscow Institute of Physics and Technology (MIPT)

BACHELOR OF SCIENCE IN PHYSICS AND MATH

[Moscow, Russia](#)

2020 - 2024

- Achieved a perfect 5.0/5.0 GPA
- Second minor in Teaching Methods and Pedagogy

### Yandex School of Data Analysis (YSDA)

ADVANCED PROGRAM IN MACHINE LEARNING (MASTER'S LEVEL COURSES)

[Moscow, Russia](#)

2021 - 2023

- Specialization in DL and NLP
- Open-source contributions (see *Projects*)
- Teaching assistant for the Advanced Machine Learning course

## Teaching Experience

### Natural Language Processing, MSc level course, YSDA

TEACHING ASSISTANT

[Russia](#)

Fall 2023

- Prepared seminar homework on Model Compression
- Individually graded said homework for a class of over 300 students

### Computational Math, BSc level course, MIPT

TEACHING ASSISTANT

[Russia](#)

Spring 2023

- Prepared and delivered a 2-hour seminar on Reinforcement Learning to a class of 30 undergraduates

### Machine Learning, MSc level course, YSDA

TEACHING ASSISTANT

[Russia](#)

Spring 2023

- Graded paper reviews and assessed ML projects for course requirements

## Projects

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### 🔗 tensor\_parallel

- An open-source **python library** for tensor parallel **PyTorch** models training and inference. Tight inregration with **Hugging Face transformers**
- More than 300 🌟 on *GitHub*
- Created under the supervision of **Yandex Research** researchers

### 😊 HuYaLM-100B

- An implementation of **YaLM-100B** LLM specifically for **Hugging Face transformers**
- Based on the officialy published **Megatron-LM** implementation

### 🔗 NLP bot

- A Telegram **bot** with a fine-tuned **Language Model**, automatic **data collection** and preparation
- Easily deployable with **Docker compose**
- Full deployment with **Telegram API**, **backend** and **metrics**