Andrei Panferov

ML Researcher

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Experience

KAUST, Optimization and Machine Learning Lab — *Saudi Arabia*
Research Intern — *July 2023 - September 2023*
- Conducted research under the supervision of Prof. Peter Richtarik on **Distributed Optimization**, focusing on Communication Compression

Eqvilent (HFT fund) — *Remote*
Software Engineer — *July 2022 - May 2023*

Yandex — *Moscow, Russia*
ML Engineer intern (NLP) — *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 — *Moscow, Russia*
Software Engineer — *July 2020 - July 2022*
- Designed a framework for quantum circuit optimization using **Python**
- Analyzed experiment data and helped build models of quantum decoherence
- Benchmarked quantum algorithms for protein folding simulation

Awards

International Physics Olympiad — *Israel*
Gold Medal — *Summer 2019*

Education

Moscow Institute of Physics and Technology (MIPT) — *Moscow, Russia*
Bachelor of Science in Physics and Math — *2020 - 2024*
- Majoring in quantum physics and quantum computations
- 5.0/5.0 GPA

Yandex School of Data Analysis (YSDA) — *Moscow, Russia*
Machine Learning Developer — *2021 - 2023*
- General and specialized ML courses
- Collaborative research and open-source contributions

Projects

⌖ tensor_parallel
- An open-source **python library** for tensor parallel **PyTorch** models training and inference. Tight inregration with **Hugging Face transformers**.
- More than *300* ⭐
- 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**

🔬 Neuromatch Academy Final Project
- Designed neural networks for calcium imaging **neuron activity** analysis
- **Convolutional network** for **time series** analysis