NIKOLAI ZHITKOV

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SUMMARY

Researcher and ML engineer with four years of experience working with superconducting quantum devices. Solving optimization problems for quantum measurement and accelerating data processing tasks for research purposes. Performed as a Project manager for the Cloud Quantum Computation platform.

Project Portfolio: [GitHub](#)
Research interests: Machine Learning, Quantum Computing, Qubit Readout, Hybrid Quantum-classical systems, Quantum Cloud

EDUCATION

Bauman Moscow State Technical University | Moscow, Russia
Specialist Degree in Engineering | 2017 - 2023
Honors:
GPA: 3.74 / 4.0
Thesis: Developing a GAN ML model and applying Genetic Algorithms to generate physics formulas based on a scanty dataset

PROFESSIONAL EXPERIENCE

Functional Micro / Nanosystems Lab (FMN Laboratory, Bauman Moscow State Technical University) | Moscow, Russia (now "Shukhov Labs, Quantum Park")
ML Researcher | April 2021 - July 2025

FMN Laboratory is a scientific & educational center conducting practical research in the field of the elemental base on new physical principles, nanophotonics, optics, superconducting quantum processors, MEMS, and thin-film technologies.

- Proposed and implemented a live-time qubit calibration dashboard for the initial stages of a single qubit calibration pipeline (spectroscopy);
- Developed a spatial distance-based clustering method of qubit single-shot measurements for noise pattern recognition;
- Developed a Qubit Measurement Statistical Analysis Tool in Python for working with raw in-phase and quadrature signals derived from ADC. The tool can predict the qubit state and allocate quantum readout jumps if there were;
- Project manager in a team of 14 members, developing cloud-based web services to access our quantum computing resources;

ADDITIONAL EDUCATION TRAINING

[Deep Learning Specialization](#) | **Deeplearning.ai** Student | 2023
PyTorch for Deep Learning | **[Daniel Bourke](#)** **PyTorch for Deep Learning** Student | 2023
[SQL for Data Science](#) | **University of California, Davis** Student | 2021
[Supervised Machine Learning](#) | **MIPT & Yandex** Student | 2021
[Mathematics and Python for Data Analysis](#) | **MIPT & Yandex** Student | 2020

CONFERENCES

- DeepTech Talk: "[Principles of quantum state discrimination using deep learning](#)", 2024
- "Architecture development and implementation of a cloud service for running custom algorithms on a hybrid coprocessor" project, Hybrid Computing track. Speaker at "[Quantum Park in Priority 2030](#)" Workshop at Bauman Moscow State Technical University, 2023
- XVII Scientific and Technical Conference "VNIIA-2023". Speaker: Spatial clustering of single measurement data of the ground and excited states of qubits to detect external noise effects, 2023
- [Yandex Practical ML Conf](#), 2023
- [Yandex ML Party "Diffusion models"](#), 2023
- [Student Scientific Spring](#), 2022. Speaker, Paper report: Generative-Adversarial Networks As A Solution To The Problem of Small Amount of Experimental Data

PAPERS

- [Subangstrom ion beam engineering of buried ultrathin oxides for scalable quantum computing](#) (co-author)