ERIKA SHEFER

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EDUCATION

ITMO University, Saint-Petersburg, Russia 2018 — 2023
Bachelor of Applied Mathematics and Computer Science

EXPERIENCE

Yandex Kinopoisk Feb 2023 — Jun 2023
Research Engineer

· Created a reference rate-control algorithm for the x264 codec, implementing the concept of genetic parameter exploration for frame quantization in a specific narrow-case GOP structure.
· Optimized quantization parameters using proposed algorithms and achieved an average performance improvement of 15.8% over x264 based on the BD-rate metric.

Huawei St.Petersburg Research Center Jul 2019 — May 2022
Research and Development Engineer in OS Algorithm Team

· Developed an enhancement to the memory management system for mobile phones, which was implemented in Harmony OS 2.0.
· Implemented a comprehensive ML pipeline in Python and C++, covering data processing, feature engineering, training, inference, and metric evaluation.
· Generated synthetic data for testing the ML pipeline.
· Prepared the ML pipeline for production deployment.

PROJECTS AND PUBLICATIONS

Method and apparatus for clustering time series data 2022
Patent WO2022139615A1

Main inventor of a patented computer-implemented method for clustering time series data, involving the initiation and expiration of active segments based on event types, the method effectively divides input data series into distinct activity clusters.

EXTRA-CURRICULAR ACTIVITIES

IO Problem Setter 2018

· Developed problem statements, test cases, solutions, and editorial content for programming tasks in an Internet Olympiad.

NEERC ICPC finals volunteer 2018

· Assisted in material preparation and technical support for organizing opening and closing ceremonies.

Tutor in Summer Informatics School 2018

· Organized lectures on algorithms and data structures for school students in SIS.

TECHNICAL STRENGTHS

Technical Skills	Algorithms and Data Structures, Machine Learning, Video Compression
Computer Languages	Python, C++
Technologies	Pandas, NumPy, Sklearn, PyTorch, TensorFlow
Languages	English, Russian