Egor Koptelov

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Summary

5th year specialist MSU (Mechanics and Mathematics department) student. Has 3+ years of programming experience, 2 years of Data Science & Research experience, 9+ ML/DS projects.

Education

- 2020 - 2026 Specialist Degree at MSU (Mechanics and Mathematics department)
- 2021 - 2022 *ShareMSU* – Deep foundations of classical ml and computer vision
- 2022 (autumn) *ODS RL* – Basic approaches of reinforcement learning
- 2020 - 2021 *Deep Learning School* – Basic methods of machine learning and computer vision

Skills

- Machine Learning, Deep Learning, Computer Vision, RL, Time Series
- Python, Pandas, Numpy, SciPy, Scickit learn, PyTorch, CatBoost, XGBoost, OpenCV etc.
- Git, CI/CD, Mlflow, Onnx, DVC, Hydra,

Work Experience

Aramco Innovations (research center of Saudi Aramco) June 2023 - present

Responsibilities

Build and improve machine learning models using python for industrial applications in geology and geoscience domain, Creating datasets for machine learning model training using multidimensional tabular and time series data, Preparing and delivering the presentations with the results of computational experiments and interpretation of the machine learning results.

Projects

LogLAB: Industrial application for predicting porosity values in the well based on well-logging data

– Improved accuracy of prediction by implementing more advanced machine learning approaches: exploratory data analysis, data clustering, time series data processing methods, gradient boosting models.

– Optimized application performance in terms of time and memory by using code refactoring, CI/CD pipelines, profilers, linters etc.

– Designed and developed a three page browser application GUI based on Streamlit python library

RockLAB: Research projects on classification and segmentation of lithological fractions based on images of geophysical cuttings

– Development of python package for training convolutional neural network to detect images quality control using mlflow server for experiments tracking

– Improved the prediction accuracy of the classification model by applying more advanced image preprocessing techniques and fine-tuning the model

Vr MSU (research laboratory in MSU) September 2022 - May 2023

Achievements

– Developed the theory of differential neural networks and improved the accuracy of dynamic motion forecasting

– Collected and marked up the data for learning neural networks to predict the maneuver of aircraft

Supplementary experience

GeoVision hackathon (3rd place) – Application based on the developed algorithm for automatic digitization of well geophysical survey data

Shell.ai hackathon – Developed a machine learning model for efficient agricultural waste collection, by predicting the waste generation

Tenderchak – Built a predictive pricing system for the supplier portal based on Bert NLP nueral network