ALEKSANDR ISAKOV

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OBJECTIVE

I am a Data Scientist in SBER, working in the risk modeling department. I work with tabular models and their interpretability. Also, I was graduated from Skoltech and BMSTU. I have gained a wide knowledge from startup foundations and leadership to data science and many other technical disciplines. Took the leadership of a team of 4 people on competitions.

EDUCATION

Master of Sciences in Energy Systems 2018 - 2020
Skolkovo Institute of Science and Technology, Moscow. GPA : 4.75/5
Courses: Introduction to DS, Machine Learning, Optimization Methods, Leadership for innovators

Specialist in cryogenic systems 2012 - 2018
Bauman Moscow State University, Moscow. GPA : 4.6/5
Courses: Probability theory, Linear Algebra, Calculus, Differential equations, Applied physics

INDUSTRY EXPERIENCE

SBER November, 2020 - now
Data Scientist *Moscow, Russia*
· Worked with multiple datasets to perform analysis, developed models on partial and full payments prediction.
· Checked various hypothesis in fraud detection, estimated models in production.
· Created XML-parser for data processing from credit history bureau.

TION Smart Microclimate June - August, 2019
Research intern, R&D *Moscow, Russia*
· Worked on the broad literature review of technological and management methods used in Demand Response.
· Made the comparison of ways to control the microclimate system was made. Increase of artificial intelligence-based control (regression, deep learning, reinforcement learning) was noted.
· The work is published as a report and provided to the company.

TECHNOLOGIES AND LANGUAGES

Development	Python, Julia, Git, Docker, LaTeX, SQL
ML&DL	Numpy, Pandas, sklearn, TensorFlow, Keras, lightgbm, shap
Languages	Russian (native), English (fluent), French (basic)

PROJECTS AND COMPETITIONS

Fraud detection in late collection using April - June, 2021

· Worked with credit card fraud cases. Data has 70k observations. Analyzed different sources of data and collected the dataset from various aggregates. Discussed the choice of metrics and how to evaluate the quality of the model. A complete analysis of the features based on their correlation and contribution to the prediction is carried out. Then an interpretable model on N of them was built.

Model development for partial repayment prediction in early collection. March 2021

· Developed lightgbm model for partial payment prediction. Data has 3.4M observations. Created pipeline for data preparation, feature generation and selection, model training, and optimal parameter search. The model has successfully built in the production.

Online-update November, 2020 - February, 2021

· Investigated the online update influence on debt repayment by clients in the early collection. Data has 1.6M observations. The model was used to search next best communication (NBA). It is proved that in the case of an online update, the model can maximize the Gini-metric on *N points.*

McKinsey ProHack competition July 2020

· Prediction of the development index of "galaxies" using regression, solving the problem of optimal resource allocation between them. Initial data distribution is asymptotic and sparse. Top-40% solution. Tried classical regression in combination with one-layer NN (Pytorch). Optimization problem solved by own algorithm, checked using CVXPY.

Mathematical modeling of a thermodynamic processes inside the room June 2019 - June 2020
Master's Thesis

· The mean absolute error of the model from the experimental data is not more than 5%. The mathematical HVAC model is modified by adding a thermal energy storage to it. The MINLP optimization problem is simplified to the MILP problem with less than 0.1% accuracy loss. Created a custom algorithm for finding the optimal mode of operation of the air conditioner. The hypothesis about the possibility of charging a heat storage device at night from cold air was proved.

EXTRA-CIRRUCULAR ACTIVITIES

Chemistry olympiad winner in team of BMSTU April 2013

McKinsey sympathy award at European BEST Engineering Competition November 2016

Military department of BMSTU 2015 - 2017