



Nikita Kozodoi

ML/DL researcher with focus on tabular and computer vision problems

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◦ <https://kozodoi.me> (project portfolio & ML blog)

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◦ <https://github.com/kozodoi>

Experience

- 04/2018 – present **Data Science Research Associate**, *Monedo / Humboldt University*, Berlin.
- developing solutions to improve ML model performance and evaluation under sampling bias by 7%
 - implementing fair ML algorithms and investigating profit-fairness trade-off in credit scoring models
 - optimizing data acquisition costs with multi-objective profit-driven feature selection
- 07/2016 – 03/2018 **Research Assistant**, *Max Planck Institute for Human Development*, Berlin.
- benchmarked managerial heuristics against ML algorithms in customer classification problems
 - analyzed factors affecting the predictive performance on marketing data sets

Education

- 04/2018 – present **PhD in Information Systems, Machine Learning**, *Humboldt University*, Berlin.
Research on ML/DL applications for credit scoring. Teaching ML and supervising M.Sc. dissertations.
- 10/2015 – 12/2017 **M.Sc. in Economics and Management Science**, *Humboldt University*, Berlin, GPA: 1.30 (A).
Focused on Machine Learning and Data Science. Double-degree program with HSE Moscow.
- 09/2010 – 06/2014 **B.Sc. in Economics**, *Higher School of Economics*, St. Petersburg, GPA: 1.31 (A).
Focused on Statistics, Time Series and Econometrics. Top-1 in the 4-year student grade rating.

Certificates

- 08/2021 **SQL for Data Science**, *UC Davis*. Learned SQL for data extraction and manipulation
- 06/2020 **Deep Learning Nanodegree**, *Udacity*. Implemented CNNs and RNNs in PyTorch [\[certificate\]](#)
- 05/2020 **Machine Learning Engineer Nanodegree**, *Udacity*. Deployed ML/DL models on AWS [\[certificate\]](#)

Technical Stack

Tools Python, R, SQL (interm) VSCode, Atom, Jupyter AWS Sagemaker, Neptune Git, Trello

Packages pandas, numpy, scipy scikit-learn, xgboost, lightgbm, hyperopt matplotlib, seaborn
 pytorch, tensorflow (interm) timm, opencv, albumentations transformers

Applications image classification, object detection, image captioning sentiment analysis, text classification
 classification, regression, clustering, dimensionality reduction

Selected ML Competitions

- 06/2021 **BMS Molecular Translation**, top-5%. Developed CNN-LSTM encoder-decoder for image-to-text translation.
- 02/2021 **Cassava Leaf Disease Classification**, top-1%. Identified plant diseases with CNNs and Vision Transformers.
- 02/2019 **Google Analytics Revenue Prediction**, top-2%. Predicted customer spending with Gradient Boosting.
- Kaggle Master: Top-1% in Competitions, Notebooks and Discussion. Profile: <https://kozodoi.me/kaggle>

Selected ML Publications

- 06/2021 **Fairness in credit scoring: Assessment, implementation and profit implications**
European Journal of Operational Research [\[doi.org/10.1016/j.ejor.2021.06.023\]](https://doi.org/10.1016/j.ejor.2021.06.023) [\[GitHub\]](#)
- 04/2020 **Shallow self-learning for reject inference in credit scoring**
European Conference on ML and PKDD [\[doi.org/10.1007/978-3-030-46133-1\]](https://doi.org/10.1007/978-3-030-46133-1) [\[Slides\]](#)
- 09/2019 **A multi-objective approach for profit-driven feature selection in credit scoring**
Decision Support Systems [\[doi.org/10.1016/j.dss.2019.03.011\]](https://doi.org/10.1016/j.dss.2019.03.011)

Further Skills

Languages **English** (C2), **German** (C1), **Russian** (native speaker)

- Key skills
- Passionate about machine learning and data
 - Inspired by using ML to improve decision-making
 - Strong motivation to learn and improve
 - Excellent presentation skills