

# Nikita Kozodoi, Ph.D.

ML researcher working on the frontier of research and business. With Ph.D. in ML and certified AWS ML knowledge, practical experience in different ML/DL areas and strong communication skills, I am passionate about using AI to solve challenging business problems. My recent projects focus on ML for credit risk analytics and DL for computer vision.

 [kozodoi.me](https://kozodoi.me) (portfolio & ML blog)

 [linkedin.com/in/kozodoi](https://linkedin.com/in/kozodoi)

 [github.com/kozodoi](https://github.com/kozodoi)

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## Experience

- 04/2018 – 04/2022 **Data Science Research Associate**, *Monedo / Humboldt University*, Berlin.
- developed sample bias mitigation algorithms to improve model profitability by up to 3%
  - reduced data acquisition costs by up to 25% using multi-objective feature selection methods
  - benchmarked fair ML algorithms to identify methods enhancing fairness at the smallest cost
  - published 5 ML papers with over 75 total citations and delivered 5 conference talks [\[Papers\]](#)
- 09/2018 – 08/2020 **Project-Based Data Scientist**, *Simply Rational*, Berlin, freelance.
- identified customer segments and prototyped segment prediction models from incomplete data
  - determined suitable treatments from A/B tests results and presented findings to corporate clients
- 07/2016 – 03/2018 **Research Assistant**, *Max Planck Institute for Human Development*, Berlin.
- benchmarked ML algorithms against simple heuristics and analyzed key performance drivers

## Education

- 04/2018 – 03/2022 **Ph.D. in Machine Learning, Information Systems**, *Humboldt University*, Berlin.  
Research on ML and DL for credit scoring. Teaching ML/DL. Supervising student theses.
- 10/2015 – 12/2017 **M.Sc. in Economics, Quantitative Methods**, *Humboldt University*, Berlin, GPA: 1.30 (A).  
Focused on Data Science and Predictive Analytics. Thesis topic: ML for box office forecasting.
- 09/2010 – 06/2014 **B.Sc. in Economics**, *Higher School of Economics*, Moscow, GPA: 1.31 (A).  
Focused on Statistics and Econometrics. Top-1 in the 4-year student ranking. Diploma with Honors.

## Certifications

- 01/2022 **AWS Certified Machine Learning**, *AWS*. Learned training, tuning and deploying ML models on AWS.
- 06/2020 **Deep Learning Nanodegree**, *Udacity*. Implemented CNNs, RNNs and LSTMs in PyTorch.
- 05/2020 **Machine Learning Engineer Nanodegree**, *Udacity*. Deployed ML models on Amazon SageMaker.
- Further certificates and course descriptions are available on my website. [\[Certificates\]](#)





## Selected ML Projects





- 05/2021 – 08/2021 **Text Readability Prediction**. Developed a PyTorch pipeline for text complexity prediction with transformers. Deployed a web app for scoring custom texts. Placed top-9% in the Kaggle competition. [\[App\]](#) [\[GitHub\]](#)
- 03/2021 – 06/2021 **Image-to-Text Molecular Translation**. Translated molecule images into chemical formulas with PyTorch. Built a CNN-LSTM architecture for image captioning. Placed top-5% in the Kaggle competition. [\[GitHub\]](#)
- 09/2019 – 04/2021 **Fairness: Package for Fair ML**. Building and maintaining an R package with over 17k total downloads. Implemented calculation and visualization of fairness metrics. Wrote documentation. [\[Blog post\]](#) [\[GitHub\]](#)
- 09/2018 – present **Kaggle Master**. Won 18 competition medals. Top-1% of the global user ranking. [\[Projects\]](#)

## Selected ML Publications

- 06/2020 – present **ML Blog**. Publishing ML/DL tutorials and project overviews. Reached over 10k monthly page views. [\[Blog\]](#)
- 11/2021 **Fairness in credit scoring: Assessment, implementation and profit implications**, *EJOR*. [\[Paper\]](#) [\[GitHub\]](#)
- 04/2020 **Shallow self-learning for reject inference in credit scoring**, *ECML PKDD*. [\[Paper\]](#) [\[Meetup talk\]](#)
- 05/2019 **A multi-objective approach for profit-driven feature selection in credit scoring**, *DSS*. [\[Paper\]](#)

## Technical Stack

Tools  Python, R, SQL (*interm*)  VSCode, Jupyter  AWS Cloud (SageMaker, EC2)  GitHub, Trello

Packages  Pandas, NumPy  PyTorch, TensorFlow (*interm*)  Scikit-learn, XGBoost  Timm, Huggingface

## Soft Skills

- Languages **English** (C2), **German** (C1), **Russian** (native)
- Key skills
- strong motivation to learn and improve
  - excellent communication skills [\[Public talks\]](#)
  - attention to detail and scientific mindset
  - rich experience of working in team projects