Konstantin Burkin

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SUMMARY: Data Scientist in tech group of the largest fastfood chain.
3+ years of production experience.
Red diploma alumnus of Lomonosov Moscow State University.

WORK EXPERIENCE

- **Middle Data Scientist** *2023 – Present* • **Technologii i tochka**
  - Project: Analysis of customer reviews with NLP
  - Stack: Python, ruBERT, Yandex-GPT
    - Automated suggestions for app improvement based on scrapped reviews from AppStore and PlayMarket.
    - Preselected informative reviews for each function of app and aggregated them using Yandex-GPT.

  - Project: Sales forecasting
  - Stack: Python, PyTorch, SQL, CatBoost, SARIMA, Airflow, MLflow, Git, DVC
    - Developed LSTM for univariate time series prediction to eliminate scheduled training and improve WAPE by 6%.
    - Modeled products similarity via graph architecture to predict sales of new products using GNN.
    - Developed baseline model for predictions of unpopular products. Improved MAE by 4%.
    - Engineered features for boosting models to improve predictions of regular and promo sales.

- **ML researcher** *2021 – 2023* • **Higher School of Economics University**
  - Project: Prediction of outcomes for cardiovascular patients based on clinical data.
  - Stack: Python, Git, Bash, scikit-learn, imblearn, Optuna, MLxtend, CatBoost, Pandas, NumPy
    - Demonstrated biomarkers' predictive capabilities (up to 5% AUROC increase).
    - Determined 2 primary predictors by feature selection algorithms: SHAP and SFS, retaining F_2>0.6 and AUROC>0.8.
    - Increased Recall by 9% by tuning models with respect to F_2 metric.
    - Published results at the conference and earned grant support of federal academic program.

EDUCATION

- **PhD program in Machine Learning** *2023 – Present* • **Higher School of Economics University**
  - Project: Parsing unstructured medical data

- **Program: Neural networks in research** *2022 – 2023* • **Lomonosov Moscow State University**
  - Scholarship: top-25 based on ML competition and academic results

- **BSc & MSc in Fundamental and Applied Chemistry** *2017 – 2023* • **Lomonosov Moscow State University**
  - GPA: 4.97/5, Red diploma
  - Academic council Scholarship: top-10 MSU students for scientific achievements

INDIVIDUAL PROJECTS

- **Delivery Club Sales Prediction**
  - Stack: Python, scikit-learn, CatBoost, Pandas, PyTorch, Pandas, NumPy, Plotly
    - Compared effectiveness CatBoost and LGBM models for weekly sales prognosis.
    - Compared models for univariate time series. SARIMA outperformed LSTM in accuracy and training time.