Maxim Koltiugin

GitHub | Telegram

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Summary

I am a Master's graduate from the HSE program specializing in **Machine Learning**. My academic background has provided me with a solid foundation in key areas such as **Mathematical Analysis, Linear Algebra, Probability Theory, and Statistics**.

I am proficient in **Python** and have hands-on experience with its major libraries for data analysis and machine learning. My coursework has included in-depth studies in **ML, DL, NLP, CV, RL, Digital Signal Processing** among others.

Technical Skills

Machine Learning : PyTorch, Transformers, Scikit-learn
Others : NumPy, Pandas, SQL, PySpark, Git, Docker

Education

Higher School of Economics — St-Petersburg
M.S. in Machine Learning — *Sep 2022 – May 2024*

Higher School of Economics — St-Petersburg
B.S. in Economics — *Sep 2017 – May 2021*

Experience

AI Research Intern — Feb 2024 – June 2024
Huawei — *Saint Petersburg, Russia*

- Conducted research on foreign accent conversion
- Successfully synthesized a parallel dataset
- Proposed, implemented and trained a model by integrating HuBERT with HiFi-GAN

Projects

Predators and Preys agent — *Reinforcement Learning, PyTorch* — Source Code

- Proposed reward system, model architecture and the algorithm to train **Deep Q-Network**
- Took **first place** in the competition among the course participants

Neural audio effects — *Torchaudio, Neutone SDK* — Demo

- Found two modifications of the Christian Steinmetz' **TCN** (Temporal Convolutional Network) to expand possibilities for creative use

Library Recognition — *Transformers, BERT, PyTorch* — Source Code

- Fine-tuned **BERT** to recognize the Python Library from the user's question text
- Combined self-extracted features with hidden layers

Sentiment Analysis — *Scikit-learn, PyTorch* — Source Code

- Tryed different aprroaches to preprocess text: **tf-idf, doc2vec, self-learning embeddings**
- Used ML models: **tree, knn, random forest, XGBoost and ensembles**
- Used neural nets: **FeedForward, RNN, LSTM, GRU**