Vladimir Baikalov

Machine Learning Engineer/Deep Learning Engineer

Work experience

Deep Learning Engineer/Google, YouTube.

Paris, France

Deep Learning Engineer/Yandex Technology.

Moscow, Russia

Relevant areas: Transformers, Highload, Recommended Systems

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Upcoming at January 2023

August 2021 - Present

Transferred ML model from experimental setup (Python, Pytorch) to production framework (C++, YNMT). Done weekly continuous fine tuning algorithm for production models in Yandex.Ads. It was able to apply this process in production.. This model increased GMV metric up to 1.5%.

Applied encoder-based models for improving personalized ads and search recommendations. Current solution **boosts production metric up to 6**%.

Implement multiprocessing python package (YtReader) for fast and convenient data preprocessing. Final solution reduced the time required for models training/evaluating **up to 5 times**.

Machine Learning Engineer/Huawei R&D Dept.

March 2020 - July 2021

Saint-Petersburg, Russia

Relevant areas: Object Detection/Tracking, Digital Sound Processing, Optical Character Recognition.

Algorithm for vehicles trajectories prediction using radar data only. This approach now is being used in a real-world application. Proposed solution **over-performs previous algorithm on 44**%.

Car occupation algorithm for outdoor and underground parking lots based on detection and tracking algorithms. This solution was presented to the product team for further implementation in the product.

Algorithm for the knuckle-knock sound pattern detection. Proposed architecture achieved **90**% Precision and **95**% Recall. With touch sensors usage Precision was improved up to **94**%.

Researcher/ITMO University, ML Lab

Saint-Petersburg, Russia

Relevant areas: Reinforcement Learning

September 2020 - July 2021

Developed multi-agent policy-based algorithm **REM** (**Reinforce**, **Embedding**, **Monte-Carlo**) for baggage handling system (BHS), which over-performs previous approaches. This result was statistically proven with received **p-value** less than **0.01**.

The paper, «Multi-Agent Deep Reinforcement Learning-Based Algorithm For Fast Generalization On Routing Problems», with the partial description of this project, was published on the YSC 2021 conference. This project was held in the collaboration with Aalto University, Finland.

Education

Master degree/Skoltech, DS major

September 2021 - Present

Moscow, Russia

Current GPA: 5.00/5.00

Thesis project: Attention mechanism acceleration via tensor and matrix decompositions

Bachelor degree/ITMO University, CS major

September 2017 - August 2021

Saint-Petersburg, Russia

GPA: 4.65/5.00

Thesis project: Implementing multi-agent policy-based algorithm for conveyor systems

Skills

Programming languages

Proficient: Python, C++

Advanced: Java, Bash, SQL

Technologies

Proficient: Pytorch, OpenCV, Git Advanced: Tensorflow, PySpark Extra

English: IELTS C1 Certified ICPC Contest Volunteering