Ivan Lazarevich

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Experienced deep learning research and development engineer. Skilled in deep learning, classical machine learning and Python. Looking for an applied deep learning researcher / deep learning engineer position.

Skills and expertise

Python (5 years), PyTorch (3 years), TensorFlow (1 year), OpenVINO, Linux, git, CI/CD (Jenkins), numpy, scipy, sklearn, pandas, jupyter.

Experience

Jul. 2019–current **Senior Deep Learning R&D Engineer**, *Intel Corporation*, Nizhny Novgorod, Russia.
- Development of state-of-the-art neural net compression algorithms from prototype to productization (with focus on quantization and pruning methods).
- Developer of Neural Network Compression Framework in PyTorch/TensorFlow (github link).
- Developer of Intel OpenVINO network optimization tool for efficient low-bitwidth post-training quantization and pruning of neural nets (link).

2017–2019 **Software Engineer**, *Intel Corporation*, Nizhny Novgorod, Russia.
- R&D in optimization of parametric models for molecular dynamics (MD) simulations
- Usage of machine learning/deep learning approaches to drive MD modeling

2016 **Research Intern**, *Laval University*, Quebec City, Canada.
- Analysis of calcium imaging data, parametric model optimization (signal processing in Python)

2015–2017 **Software Engineering Intern**, *Intel Corporation*, Nizhny Novgorod, Russia.
- Research and development of atomistic simulation tools (molecular dynamics) for industrial process modeling

Publications

[1] Alexander Kozlov, **Ivan Lazarevich**, Vasily Shamporov, Nikolay Lyalyushkin, and Yury Gorbachev. Neural network compression framework for fast model inference, *arXiv preprint arXiv:2002.08679.*, 2020.

[2] Johann Lussange, **Lazarevich, Ivan**, Sacha Bourgeois-Gironde, Stefano Palminteri, and Boris Gutkin. Modelling stock markets by multi-agent reinforcement learning. *Computational Economics*, 57(1):113–147, 2021.

[3] **Lazarevich, Ivan**, Alexander Kozlov, and Nikita Malinin. Post-training deep neural network pruning via layer-wise calibration. *arXiv preprint arXiv:2104.15023*, 2021.

[4] **Lazarevich, Ivan**, Ilya Prokin, Boris Gutkin, and Victor Kazantsev. Neural activity classification with machine learning models trained on interspike interval time-series data. *bioRxiv*, 2021.

Education

2017–2021 **Doctorate**, *École normale supérieure*, Paris, France.
Researching machine learning approaches to neural activity decoding.
Joint doctorate with the Lobachevsky State University of Nizhni Novgorod.

2014–2016 **MSc in Physics**, *Lobachevsky State University of Nizhni Novgorod*.
Advanced School of General and Applied Physics; honors

2010–2014 **BSc in Physics**, *Lobachevsky State University of Nizhni Novgorod*.
Advanced School of General and Applied Physics; honors