Volodymyr Lazor

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Education

Odesa I.I. Mechnikov National University | Bachelor of Applied Mathematics **2021-2025**

Skills

Languages: Ukrainian (native), English (upper-intermediate / B2), Russian (fluent)

Programming languages: Python, C++

Scientific libraries: PyTorch, OpenCV, Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Sympy

Math fields: Calculus, Linear Algebra, Probability Theory, Statistics, Optimization Methods

Databases: MySQL

Tools: Jupyter Lab, Git, GitHub

Soft skills: adaptability, openness to criticism, attentiveness.

Work experience

Boffin Online School | Math and Python tutor

- Taught math to students from 5-th to 9-th grade. Helped students to gain a broad understanding of how math works and its applications in the real world.
- Taught Python basics to students from 5-th to 7-th grade. Motivated students experiment a lot and to think creatively for making quick intuitive decisions.

Projects

Research on gradient methods | Python, Numpy, Sympy

A coursework, which was conducted to study the impact of restart procedure on the convergence of gradient methods, specifically conjugate gradient descent (CGD).

- A comparison was made between CGD with and without restart procedure, using different test functions.
- The study concluded that restart procedure speeds up the CGD method roughly by 50% on average.

Vodafone Age Dataset analysis | Python, Numpy, Pandas, Scipy, Scikit-Learn, Matplotlib, Seaborn

An exploratory data analysis (EDA) of the vodafone age dataset, followed by ML model training.

- EDA made it possible to establish crucial information about age groups and also helped to reduce the dataset dimensionality for further model training.
- It was shown that many popular ML models perform poorly on messy and relatively big datasets.

ResNet20 implementation | Python, PyTorch, OpenCV, Numpy, Pandas, Matplotlib, Seaborn
A custom residual network implementation (specifically ResNet20).

- It was concluded that small residual networks can perform relatively well even after a few training epochs, and it is possible to train such a model on your local machine.

Modified Vision Transformer implementation | Python, PyTorch, OpenCV, … (same as in the previous)
A custom implementation of the vision transformer (ViT), combined with ResNet20 for feature extraction.

- It was shown that ViT has better generalization capacity compared to ResNet.
- The combination of ViT with ResNet proved to be efficient for image classification tasks.