Maksim Sapronov

Czech, Prague

Internship or Junior Part-time position as
Data Scientist/Analyst or Machine Learning Engineer

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SKILLS AND TOOLS

Programming Languages: Python, R, C/C++
Classic ML: Pandas, NumPy, Scikit-learn
DL: PyTorch, Hugging Face Ecosystem
Visualization: Matplotlib, Seaborn, Plotly
Databases: PostgreSQL
Tools: JupyterLab, LaTeX, Wolfram Mathematica
Other: Data Structures & Algorithms, Linux, Git
Languages: English (B2), Czech (B1), Russian (native)
Theory: Most popular ML models and DL architectures, linear algebra, calculus, probability theory and statistics

PERSONAL PROJECTS

- **Tensor-valued autograd engine (kittygrad)** ↗

  A small NumPy-based deep learning library with PyTorch-like API

  – Autograd engine (with 25+ operations)
  – Computational graph visualization
  – Custom functions support

- **Adaptive Instance Normalization implementation** ↗

  Unofficial PyTorch implementation of the Arbitrary Style Transfer in Real-time with Adaptive Instance Normalization paper

  – Code for model training
  – Playground

- **PyTorch Word2Vec implementation** ↗

  Unofficial implementation of the Efficient Estimation of Word Representations in Vector Space paper

  – Skip-gram Model
  – Code for model training
  – Playground, cluster analysis

- **Kotlin Code Completion with Phi-1 Transformer** ↗

  SLM fune-tuning for code completion task

  – Dataset creation
  – Adaptation of the model to the task
  – Fine-tuning using QLoRA
  – Beam search implementation

- **Malaria cell image classification** ↗

  Classification of malaria cell images using a simple CNN with PyTorch

  – Code for model training
  – Visualizations

EDUCATION

- **Bachelor of Artificial Intelligence (GPA 3.51)**   *2022-25 (expected)*

  Faculty of Information Technology, CTU in Prague

  Relevant courses:

  – Linear algebra, Calculus, Selected mathematical methods
  – Probability and Statistics, Practical statistics
  – Data visualization, Machine learning, Introduction to Artificial intelligence
  – Programming in Python, Database Systems, Computer networks