

ANASTASIIA FILIPPOVA

Rhodanie 64B, Lausanne, Switzerland

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- 3+ years of experience in data analysis, ML and AI.
- Experienced in deploying ML models to production and writing data collection protocols.
- Strong engineering, math, programming and communication skills.

Education

École Polytechnique Fédérale de Lausanne (EPFL)

Master in Data Science (5.7 / 6.0 top 5% students)

Sep. 2021 – Dec 2023 (expected)

Lausanne, Switzerland

Moscow Institute of Physics and Technology (MIPT)

Bachelor of Science in Applied Math and Physics (4.8 / 5.0)

Sep. 2017 – June 2021

Moscow, Russia

Experience

Mackenzie Mathis Lab (Adaptive Motor Control Lab)

Research Assistant

Sep. 2022 – Present

Geneva, Switzerland

My research goal in the lab is to build robust models for behaviour analysis learning the structure of the data.

- Work on [ModelZoo](#) in improving the generalisation ability of models for animal pose estimation
 - Developed transformer-based models for animal pose estimation in [DeepLabCut](#)
- Work on [CEBRA](#) extension under the supervision of [Steffen Schneider](#)
 - Developed training with asymmetric encoders for self-supervised representation learning
 - Implemented self-supervised contrastive regression

Topics: Self-supervised learning, contrastive learning, pose estimation, transformer-based architectures.

Machine Intelligence Lab

ML Researcher

Sep. 2019 – June 2021

Moscow, Russia

Start-up helps big technical companies to research advanced Artificial Intelligence Models and create High-Tech Products

- Dehydration estimation via smartwatch for [Samsung Research](#)
 - Developed end-to-end aggregated output regression model
 - Increased R^2 score of existed solution in 17%
- [Neuro Sense](#): Hardware-constrained human activity recognition, activity embeddings construction and heart rate estimation
 - Archived MAE 5 bpm and MAPE only 4% (twice as accurate as competitors)
 - Built a proof of concept for product: [Neuro Sense](#)
 - Archived low model energy consumption (0.1 mW) by using small number of parameters (5M MAC operations)
- Inertial navigation and activity recognition on smartphones for [Huawei Research](#)
 - Created new algorithm for gyroscope bias correction based on quaternions correction
 - Archived 8.9 RMSE and 6.0 MAPE in trajectory estimation task on the customer's dataset

Responsibilities: Generate and test project hypotheses, study scientific literature, conduct computational experiments, write technical reports, conduct presentations of progress, communicate with customers on weekly meetings.

Technical Skills

Languages & Frameworks: Python, PyTorch, PyTorch Lightning, React, SQL, Bash, Jupyter

Dev(ML)Ops Tools: Git, Github, Docker, Weights & Biases

Scholarships & Awards

EPFL Master Research Scholarship

Sep. 2021 – Sep. 2022

MIPT Abramov foundation scholarship for outstanding students (top 5%)

Feb. 2020 – Sep. 2020