

# Lev Telyatnikov



📍 Rome, Italy

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## Work Experience

### Computer Vision Research Fellow, France

[Ecole Polytechnique](#) | February 2021 - August 2021

Developed an end-to-end **representation learning** approach for 3D objects symmetry encoding. Obtained latent space has allowed manipulating Intrinsic and Extrinsic symmetry of 3D shapes. Incorporating symmetry information improved the zero-shot classification (2%) as well as object denoising performance (4%).

### Audio Data Scientist Intern, Italy

[Translated](#) | February 2021 - August 2021

Developed a **self-supervised representation learning** pipeline for cross-lingual prosody transfer. Italian <→> English prosody transfer has been achieved (TTS task). Robust Mean Opinion Score score was improved by 5% compared to baseline Tacotron + GST.

### NLP Data Scientist Intern, Russia

[Sberbank](#) | June 2020 - December 2020

Deployed audio denoising and speech defects classification (SPC) into an automated hiring process. Incorporating a metric learning approach into the SPC pipeline improved the f1 score by 4%. The obtained pipeline was integrated into production.

## Education

### Ph.D. in Data Science

[Sapienza University, Rome](#) | November 2021 - November 2024

Research topic: Efficient self-supervised techniques for general audio representation based on human perception.

### M.Sc. in Data Science

[Sapienza University, Rome](#) | September 2019 - October 2021

GPA: 4.0 - graduated with honors; Thesis: Latent space of 3D shape manipulation.

### B.Eng. in Applied mathematics and Computer science

[PFUR, Russia](#) | September 2015 - June 2019

GPA: 4.0; Thesis: Lossless audio data compression with enhanced LPC.

## Projects

### Audio dataset syntheses

[In progress](#) | Library: [radiomixer](#), [link](#)

The aim of radiomixer is to provide the tool to perform artificial audio data synthesis with the help of radio DJ mixing techniques. It presents advanced control on a fade in/out shapes and duration, overlapping, and other tiny parameters.

### Recognition of marine seismic data

[In progress](#) | Research, [link](#)

Seismic diffractions classification to detect Direct Hydrocarbon Indicators

### Image Search Engine

[September 2021](#)

Google Training Camp Competition, developed an attention-based image captioning method that uses InceptionV3 and RNN, which won the first place.

### Object Detection

[July 2020](#)

Landmark detection and population estimation with the help of satellite images.

## About me

Ph.D. student with research interests in Deep learning in the Audio Domain and NLP. Passion about **object-centric** models and **neural reasoning**. Experienced in representation learning, self-supervised learning, and other areas. Highly skilled in Deep Learning: GCN, CNN, RNN, Transformers. **I am interested in research internship in Data Science.**

## Computer Skills

### Programming Language:

Python, R, MATLAB, SQL

### Frameworks/Libraries:

PyTorch, TensorFlow, OpenCV, scikit-learn, pandas, NumPy

### Other Software/Tools:

Docker, dvc, AWS, Git, Apache Hadoop, Spark, Docker, MongoDB

## Language Skills

**Russian** (Native)

**English** (Advanced, C1)

**Italian** (Intermediate, B1)

## Publications

### Linear Prediction Algorithms for Lossless Audio Data Compression.

International Conference on Neuroinformatics, 2019. Periodical: Advances in Neural Computation, Machine Learning, and Cognitive Research

## Awards and activity

**Winner** of [Google](#) training campus, 2020 (Image Search engine: CV, NLP)

**HSE** diploma of bachelor research, 2019 (Bachelor diploma research award)

**Course** Computer Vision 2019

**Hackathon** winner: Breakpoint, 2017

## References

Assist. Prof. **Simone Scardapane**

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Director of AI **Sébastien Bratières**

[Translated, Rome](#)

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Professor, **Maks Ovsjanikov**

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