

OLGA SOROKOLETOVA

Machine Learning Engineer

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♥ Rome, Italy

in olgasorokoletova

olga-sorokoletova



WORK EXPERIENCE

Machine Learning Engineer

CY4GATE

Oct 2023 – Oct 2024

♥ Rome, Italy

- Conducted extensive research and designed a novel modular, scalable, and data-independent Natural Language Processing framework for Information Extraction from Cyber Threat Intelligence reports.
- Surpassed state-of-the-art in Named Entity Recognition (NER) within the cybersecurity domain.
- Introduced an advanced approach for Semantic Text Similarity (STS) using Cross-Encoders trained without annotated data.
- Contributed to the Attack Model Enrichment of the international Alnception project to enhance cyber defense operations. Project link: **Alnception**.
- Enhanced the functionality and performance of the company's Decision Intelligence platform product.
- Worked with taxonomies (Text Classification), Retrieval-Augmented Generation (RAG) systems, and Large Language Models (LLMs).

👥 Workshop Publication

- **O. E. Sorokoletova**, E. Antonioni, and G. Colò, "Towards a scalable AI-driven framework for data-independent Cyber Threat Intelligence Information Extraction," in *The First International Workshop on Generative AI for Textual Document Analysis, FLLM2024*, 2024.

Risk Analyst

OTP Bank

Sep 2019 – Sep 2020

♥ Moscow, Russia

- Automated the calculations of NPV using, driving operational efficiency.
- Performed statistical analysis on COVID-19 affected client segments to optimize loan issuance with minimal risk exposure.
- Analyzed complex creditworthiness data and developed a DL-based scoring model that improved accuracy, leading to a more reliable lending process.

EDUCATION

M.Sc. in Artificial Intelligence and Robotics

University of Rome La Sapienza

2020 – 2023

♥ Rome, Italy

Master's Thesis: **Enhancing Robot Reliability for Health-Care Facilities by means of Human-Aware Navigation Planning.**

Conducted in the RoCoCo (Cognitive Cooperating Robots) laboratory at the Faculty of Information Engineering, Informatics, and Statistics (DIAG) in collaboration with the LAAS-CNRS research institute.

Final Grade = 110/110 (GPA = 3.3).

📄 Publications

- **O. E. Sorokoletova** and L. Iocchi, "Enhancing robot reliability for health-care facilities by means of Human-Aware Navigation Planning," <http://arxiv.org/abs/2409.17131>, 2023.
- **O. E. Sorokoletova**, L. Nicoletti, and L. Maglianella, "Planning Parking Maneuvers for a Car-Trailer Vehicle," *Sapienza*, vol. 1792507, pp. 1 797 464–1 937 430, 2022.

B.Sc. in Applied Mathematics and Computer Science

M.V. Lomonosov Moscow State University

2015 – 2019

♥ Moscow, Russia

Bachelor's Thesis: **Deep Learning for Cryptocurrency Time Series Forecasting.**

Conducted within the Department of Mathematical Statistics and Probabilistic Theory at the Faculty of Computational Mathematics and Cybernetics (CMC).

Final Grade = 4.7/5.0 (GPA = 3.7).

📄 Journal Article

- **O. E. Sorokoletova** and T. V. Zakharova, "Random Sampling Method for Cryptocurrency Market Time Series Forecasting," *Systems and Means of Informatics*, vol. 29, pp. 65–72, 4 2019.

TECHNICAL SKILLS

Python Libraries

Deep Learning and Machine Learning:

- TensorFlow/Keras
- PyTorch/Fastai
- Scikit-Learn

Natural Language Processing:

- Transformers/Sentence Transformers
- NLTK
- spaCy
- re

Computer Vision:

- OpenCV
- PIL

Data Science:

- Pandas
- NumPy
- SciPy
- Apache Spark

Data Visualisation:

- Matplotlib
- Seaborn

Development Tools

- Docker
- Microsoft Azure
- Git
- FastAPI

Robotics Kit

- ROS
- MATLAB
- PDDL
- Prolog
- NAOqi
- OMPL
- OpenSim
- Android Studio

Other Programming Languages

- C/C++
- SQL
- R
- SAS
- Assembly x86

LANGUAGES

Russian

English

Italian



COMPETENCES

- Machine Learning
- Deep Learning
- Reinforcement Learning
- Natural Language Processing
- Computer Vision
- Artificial Intelligence
- Generative AI
- AI for Cybersecurity
- Cyber Threat Intelligence
- Robotics
- Navigation and Path Planning
- Intelligent Data Analysis
- Data Mining
- Data Science

SOFT SKILLS

- Problem Solver
- Collaborative Team Player
- Committed and Hard-working
- Methodical and Analytical Thinker
- Continuous Self-Improvement Oriented