Paulina Moskwa

Computer Vision and Artificial Intelligence Researcher

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📶 TECHNICAL SKILLS

Fields of Activity	Computer Vision, Deep Learning, Machine Learning, Statistical Modeling, Data Mining
Programming Languages	Python, C++, R
Machine Learning Frameworks	Scikit-learn, PyTorch, TensorFlow, Keras, Statsmodels, XGBoost
Data Analysis/Viz Tools	Numpy, Pandas, Seaborn, Matplotlib, Streamlit, Requests, Folium
Additional Tools	OpenCV, Git/GitHub, AutoML, LabelImg, PyGame, HTML (basic)
Report Writing	Markdown, LaTeX, Google Tools, MS Office (PowerPoint, Word)
Spoken Languages	English (TOEIC certification B2 level, 2018), Italian, Polish

📁 FEATURED PROJECTS

Real-Time Sign Language Detection
github.com/PaulinoMoskwa/Real-Time-Sign-Language

Adapted YOLOv5 for real-time sign language detection via PyTorch and OpenCV. Labeling and data drift have also been addressed.

`Python` `YOLOv5` `PyTorch` `OpenCV` `LabelImg` `Real-Time`

Pediatric Pneumonia Chest X-Ray Classification
github.com/PaulinoMoskwa/Pediatric-Pneumonia-Chest-X-Ray

Deep learning CNN model to classify, and thus predict, pediatric chest X-ray with pneumonia versus without pneumonia via PyTorch.

`Python` `PyTorch` `CNN` `Image Classification` `Medical Dataset`

Face Mask Recognition
github.com/PaulinoMoskwa/FaceMask-CNN

Deep learning CNN model to understand if all people, some or none have face masks via TensorFlow and Keras (with explainability).

`Python` `Tensorflow` `Keras` `Image Classification` `Explainable AI`

Social Distancing Detector and People Counter
github.com/PaulinoMoskwa/Real-Time-Social-Distancing

Transfer learning YOLOv5 for real-time social distancing detection and people counting via PyTorch and OpenCV.

`Python` `YOLOv5` `PyTorch` `OpenCV` `Real-Time Object Detection`

💼 WORK EXPERIENCE

Ongoing – 03/2022 | **Data Scientist Intern** ❙ Cefriel, Milan (Italy)
- Actively participated in the structuring of the workflow of a major deep learning project
- Designed, retrieved, assembled and managed image databases of relevant dimensions
- Designed and implemented an ensemble model composed of multiple convolutional neural networks for image classification using python and TensorFlow
- Implemented a semantic segmentation model for the detection and subsequent removal of unwanted objects using python, TensorFlow and LaMa algorithm
- Restored underwater imagery through a deep learning approach using python
- Designed, implemented and deployed a WebApp POC with interactive maps equipped with popups and an integrated real-time image classifier using python and Streamlit
- Public speaking : presented achievements, ongoing work, future developments and a range of issues to non-technical stakeholders and to a tech team

`Computer Vision` `Python` `Image Database` `Image Classification` `Semantic Segmentation` `WebApp` `Public Speaking`

🎓 EDUCATION

Expected 10/2022 – 09/2019 | **Master of Science in Mathematical Engineering – Statistical Learning** ❙ Politecnico di Milano
Thesis : Deep Learning applications for underwater frameworks.
Core subjects : Data Mining and Text Mining, Machine Learning, Deep Learning, Applied Statistics, Bayesian Statistics, Nonparametric Statistics, Algorithms and Parallel Computing, Stochastic Dynamical Models.
All notes are freely available at github.com/PaulinoMoskwa/Univeristy-Notes

07/2022 | **Summer School – AI & Data for Science, Business and Society** ❙ Hi! PARIS
Tutorials I have attended : Optimal Transport for Machine Learning, Supervised Learning on multivariate brain signals, Image Recognition, Introduction to Deep Reinforcement Learning, Deep Learning for Audio Processing, Reliable Decision Making and Causal Inference.
All materials are available at github.com/PaulinoMoskwa/Hi-PARIS-Summer-School

09/2019 – 09/2016 | **Bachelor in Mathematical Engineering** ❙ Politecnico di Milano
Final work : Comparison between XGBoost and Logistic Regression – Analysis and prediction of benign vs. malignant breast tumor based on Breast Cancer Wisconsin (Diagnostic) dataset.
A revised version of the work is available at github.com/PaulinoMoskwa/Breast-Cancer