

# Kirykouski Arseniy

MACHINE LEARNING · DATA SCIENCE

Italy, Milan

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AI undergraduate with hands-on experience in machine learning, NLP, computer vision, and data analytics. Proficient in Python (pandas, NumPy, scikit-learn, PyTorch, OpenCV) and skilled at turning complex data into actionable insights. Passionate about applying AI to real-world business challenges and a consistent winner in international hackathons.

## Work Experience

### OmniTutoring

Remote

IB TUTOR (PART-TIME, REMOTE)

Jan. 2024 - Present

- Delivered personalized tutoring in Physics, Mathematics, and Economics for the International Baccalaureate, widely considered the most rigorous high school curriculum globally.
- On average, improved students' grades by 2 full points on the IB 7-point scale, demonstrating measurable academic impact.
- Strengthened communication and presentation skills by explaining complex concepts clearly.

## Projects

### Reviva

Linkedin

2024 - Ongoing

- Developed an AI-powered application for personalized post-stroke rehabilitation
- Implemented patient movement recognition using OpenCV and smartphone camera input
- Trained a model to provide real-time exercise feedback based solely on visual data
- Technologies: Python, OpenCV, PyTorch, Hugging Face, scikit-learn
- Won the Sopra Steria International Student Challenge with this project

### SMP2DIAG (Symptoms to Diagnosis)

GitHub

2025

- Built an NLP classifier predicting 22 medical diagnoses from patient symptom descriptions (GretelAI dataset, 1,065 samples).
- Cleaned and structured raw text data, applying tokenization, lemmatization, and embeddings (PPMI, GloVe).
- Fine-tuned transformer models: **BERT / ClinicalBERT (97% acc, F1 = 0.97)** and **Flan-T5 (94% acc)**, outperforming classical baselines (PPMI 90%, GloVe 85%).
- Python, PyTorch, Hugging Face, scikit-learn

### Bike Sharing Demand Prediction

GitHub

2025

- Developed regression models to predict bike sharing demand from weather, time, and calendar features.
- Implemented preprocessing (scaling, one-hot encoding, PCA/LDA) and trained models including **Linear/Ridge/Lasso/ElasticNet, Random Forest**, and **XGBoost**.
- Evaluated using MSE, RMSE, and  $R^2$ ; achieved strong predictive performance with tree-based ensemble methods.
- Python, scikit-learn, XGBoost, pandas, numpy

## Education

### Joint Degree: University of Pavia | University of Milan | University of Milan Bicocca

Milan, Italia

B.S. IN ARTIFICIAL INTELLIGENCE

2023 - Present

- GPA: 27/30
- 27/30 Machine Learning & Deep learning
- 28/30 Advanced Statistics & Probability

### New school, International School of Georgia

Tbilisi, Georgia

INTERNATIONAL BACCALAUREATE DIPLOMA PROGRAMME

2021 - 2023

- GPA: 42/45 (top 3% of students)
- Mathematics & Physics focus

# Languages

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- English — Fluent (C1)
- Italian — Intermediate (B1)
- Russian — Native

# Extracurricular Activity

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2025	<b>3rd place</b> , out of 850, EIT Health i-Days, Developed and presented REVIVA, an AI-powered app for post-stroke rehabilitation with personalized plans and real-time feed-back.	<i>Madrid</i>
2025	<b>Winner</b> , "Biomedicine & AI" track, Bologna StartUpDays	<i>Bologna</i>
2024	<b>3rd place</b> , out of 250, EIT Health i-Days, Represented Italy at the European Finals; received mentorship from healthcare and innovation experts.	<i>Milan, Budapest</i>