

# Mykola Kolomiets

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## Education

- Taras Shevchenko National University of Kyiv**, Master's degree Sept 2024 – June 2026  
Faculty of Computer Science and Cybernetics, Dept. of Data Science and AI  
*Focus: Computer Vision & Advanced Machine Learning*
- Taras Shevchenko National University of Kyiv**, Bachelor's degree Sept 2020 – June 2024  
Faculty of Computer Science and Cybernetics, Dept. of Computational Mathematics
- GPA: 89/100. Strong foundation in Statistics, Probability Theory, Numerical Methods.

## Skills

- **Core CV & ML:** OpenCV, PyTorch, TensorFlow/Keras, YOLO, CNNs, Object Tracking, RL.
- **Languages:** Python (5+ years), SQL, Bash.
- **Data Stack:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn.
- **DevOps & Tools:** Git, Docker, Linux (WSL/Ubuntu), Jupyter.
- **Math:** Linear Algebra, Calculus, Optimization Methods, Statistics.

## Key Computer Vision Projects

### Automated Volleyball Score Tracking System

- Developed a computer vision pipeline to track game state in real-time video footage.
- Implemented object detection algorithms to track the ball and players' positions relative to court boundaries.
- Designed logic to automatically update the score based on ball trajectory and landing coordinates.

### Visual Reinforcement Learning Agent (Atari Games)

- Built a Deep Q-Network (DQN) agent capable of playing Atari games by processing raw pixel input.
- Implemented CNN-based feature extraction and frame preprocessing pipelines (grayscale conversion, resizing, frame stacking) to optimize learning.
- Utilized Gymnasium environment and PyTorch to train the agent to achieve autonomous gameplay.

## Experience

- Data Scientist / ML Engineer**, Corezoid Sept 2024 – Present
- Developing and deploying custom ML models to optimize specific business processes within the automation platform.
  - Integrating GenAI APIs (OpenAI, Anthropic) for automated text processing and intelligent decision-making workflows.
  - Monitoring model performance and analyzing user behavior metrics to guide product optimization.
- Research Fellow**, IRIS-HEP (Princeton University / CERN) Aug 2023 – Oct 2023
- Collaborated with international specialists on software and data science projects related to High Energy Physics.
  - Setup reproducible research environments using Docker and Python for complex data analysis tasks.
- Data Analyst**, %L21UA May 2024 – Sept 2024
- Built data pipelines and performed SQL-based data extraction to ensure data quality for reporting.
  - Automated reporting dashboards to streamline decision-making processes.

## Languages

- **English:** B2 (Upper-Intermediate) – extensive experience with technical documentation and academic content.
- **Ukrainian:** Native.