IVAN MRASOV

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EDUCATION

Higher School of Economics (HSE), Moscow *2022-2026*
Bachelor's program in **Computational Social Sciences**, 3rd year.
Key courses: Python, Machine Learning, Deep Learning, Econometrics, Statistics.
GPA: 8.2 / 10.

WORK EXPERIENCE

CPM School September 2024 - December 2024
Game Theory Teacher *Moscow*

- Developed and conducted **15 interactive classes** on game theory for olympiad-level students.
- Created a **library of educational materials** with visualization of key game theory concepts.
- Implemented a **multi-level assessment system** with weekly tests and personalized feedback.

IND Architects June 2024 - August 2024
Course Assistant for "AI in Architecture" *Moscow*

- Optimized **prompt engineering** for Midjourney, Stable Diffusion and Llama 2 (via Hugging Face API), improving relevance of generated images to architectural requirements.
- Developed a **library of 50 prompts** accounting for architectural styles and model parameters, reducing prompt preparation time for new tasks to 30 minutes (according to student estimates).
- Automated **feedback analysis** from 40+ course participants using Pandas and NLP.

SKILLS

Programming Languages	Python, R, C++
Databases	SQL, Excel
Data Analysis Tools	Pandas, NumPy, Scikit-learn, spaCy, NLTK, PyTorch
Data Visualization	Matplotlib, Seaborn, Plotly, Tableau, Power BI
Languages	English C1, German B2, French A2

PROJECTS

VK Hackathon Participation

- Trained an **NLP model** (Python, BERT) for semantic analysis of reviews with **92% accuracy**.

Real-time ASL Recognition Model (PyTorch, OpenCV)

- Developed a CNN architecture for classifying 26 ASL gestures with 96% test set accuracy.
- Implemented a real-time video processing pipeline (30 FPS) using OpenCV.
- Optimized the model for different skin tones and backgrounds.

Analysis of Commute Impact on HSE Students' Quality of Life

- Developed a **parser** and automated contact data collection (Selenium + pyautogui) for **causal analysis** of commute impact on quality of life.
- Presented research at **IFTE 2024** conference with visualizations and analytical conclusions.

Agent-based Model of Political Polarization

- Developed an **agent-based model** with mechanisms of ideological and affective political polarization.
- Visualized agent position changes and model parameter effects (replicating key empirical patterns from literature).

Playlist Organization API Service

- Implemented a FastAPI service for adding, tagging, and filtering tracks by genre and tags.
- Configured database using SQLAlchemy: implemented track and favorites models, content filtering.
- Created HTML interface supporting track addition, likes, and API-based filtering.