MAKSYM LYTOVKA

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PROFESSIONAL EXPERIENCE

Data Scientist – Datargy, Energy Trading Data Services   January 2024 - Present

- Developed and **deployed time series forecasting models** (NeuralProphet, XGBoost, CatBoost, RNNs) to predict Day-Ahead Market (DAM) electricity prices **up to 40 days ahead** for Ukraine and Slovakia, powering a production system of ∼**90 active models delivering >190 forecasts daily** via Google Cloud Run.
- **Automated data processing and monitoring** pipelines, reducing manual overhead by **>90%**, and generating daily model **performance reports** consumed by analysts and executives to evaluate predictive confidence.
- **Engaged with prospective clients** (energy traders and risk managers), delivering **technical presentations and product demos** that showcased model methodology, feature selection, and forecast interpretability—contributing directly to **early-stage client acquisition** discussions.
- **Coordinated agile workflows** as SCRUM Master for an 8-person cross-functional team, cutting sprint meeting time by ∼**25%** and improving Jira backlog organization, which increased sprint completion rates.

Data Engineer – AlgoZeus, Digital Assets Fund   July 2023 - January 2024

- **Engineered analytical database** (Postgres, SQLAlchemy) to process **4.3M+ OHLCV data points** across **30+ cryptocurrencies**, enabling backtesting and portfolio analytics.
- Implemented pipelines to **calculate and visualize 10+ performance metrics** (Sharpe, Sortino, CAGR, alpha, drawdown, etc.) for ∼**150 signals → 1,200+ filtered strategies → 100+ portfolios**, supporting strategy selection by the fund's main trader.
- Delivered **dashboards and interactive visualizations** (Flask, Plotly) covering **22,500+ signal/strategy/portfolio dashboards**, improving transparency of portfolio risk/return trade-offs.
- **Built and deployed a real-time Telegram bot** (AWS Lambda, python-telegram-bot, asyncio) providing trade alerts and performance summaries for **100+ portfolios**, streamlining daily monitoring and decision-making.

RESEARCH

Leiden University   Leiden, Netherlands
Undergraduate Researcher - Video-Text Retrieval Models (https://theses.liacs.nl/3264)   January - June 2025

- Designed and conducted systematic **experiments on X-CLIP model** comparing rule-based vs. LLM-generated data augmentation strategies, achieving **2-4.5x improvement in PosRank** metric (model's ability to prioritize correct captions among similar alternatives) depending on part of speech.
- Built **scalable X-CLIP training setup** across heterogeneous **GPU servers and SLURM clusters**, handling **CUDA configuration, multi-GPU support**, and experiment tracking with Weights & Biases, while managing **multiple shell scripts** to automate and orchestrate distributed runs.
- Developed **novel evaluation framework** incorporating fine-grained robustness metrics, **reducing model Brittleness by >2x** and **improving mean rank** for text-to-video retrieval by **>10%**.

EDUCATION

Cornell Tech, Cornell University   New York, NY
MEng in Data Science and Decision Analytics, GPA: 4.11, Merit Scholarship   May 2026
Relevant Coursework: Modelling Under Uncertainty, Optimization Methods, Applied Machine Learning, Machine Learning Engineering

Leiden University   Leiden/Amsterdam, Netherlands
BS in Data Science and Artificial Intelligence, GPA: 3.89, *cum laude*   July 2025
Minor in Entrepreneurship - University of Amsterdam
Relevant Coursework: Statistics, Linear Algebra, Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning, Entrepreneurship in Practice

TECHNICAL SKILLS

Coding Languages: Python, Bash (beginner), R (beginner), Java (beginner)
Skills: Machine Learning, Time Series Analysis, ETL, Visualization, Cross-Functional Communication
Other Tools: PyTorch, CUDA, Weights and Biases, AWS (S3, DynamoDB, EC2, Lambda), Google Cloud (Cloud Run, Cloud Storage), scikit-learn, XGBoost, Scipy, NumPy, Pandas, asyncio, Plotly, Matplotlib, SQL, Postgres, SQLAlchemy, Shell scripting, Git, Jira