MAKSYM LYTOVKA

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Data Scientist focused on time series modeling and production ML for trading and risk-sensitive decisions. Experienced in non-stationary data, signal evaluation, and model monitoring on real market data.

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 electricity prices up to 40 days ahead**, operating a production system of ∼**130 active models delivering >280 forecasts daily** via Google Cloud Run.
- Designed **validation and monitoring pipelines** to track **out-of-sample performance, forecast decay, and data drift**, supporting model retraining decisions under **non-stationary market conditions**.
- Automated data ingestion, feature generation, and inference workflows, reducing manual intervention by **>90%** while ensuring reproducibility and failure isolation.
- Aligned forecasting objectives with **trading and risk-use cases**, explicitly analyzing forecast uncertainty and error asymmetry relevant to price-sensitive decision making.
- Presented model methodology, feature behavior, and interpretability to **energy traders and risk managers**, contributing to early-stage client acquisition discussions.

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

- Engineered analytical data infrastructure (Postgres, SQLAlchemy) to process **4.3M+ OHLCV observations across 30+ cryptocurrencies**, enabling large-scale backtesting and portfolio analysis.
- Implemented backtesting pipelines to evaluate **risk-adjusted performance and robustness metrics** (Sharpe, drawdown, turnover, CAGR, alpha) across ∼**150 signals → 1,200+ filtered strategies → 100+ portfolios**, supporting **signal selection and capital allocation**.
- Built real-time monitoring tools (AWS Lambda, asyncio, Telegram bot) delivering trade alerts and portfolio summaries for **100+ portfolios**, improving responsiveness to market changes.

RESEARCH

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

- Conducted systematic experiments on the **X-CLIP model**, comparing rule-based and LLM-generated data augmentation, achieving **2–4.5× improvement in PosRank** depending on linguistic structure.
- Built scalable training pipelines across heterogeneous **GPU servers and SLURM clusters**, managing CUDA configuration, multi-GPU execution, and experiment tracking with Weights & Biases.
- Developed an evaluation framework emphasizing **robustness, generalization, and failure modes under distribution shift**, reducing model brittleness by **>2×** and improving mean rank 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

TECHNICAL SKILLS

Programming: Python (advanced), SQL (advanced), Bash (working), C++ (basic), Java (basic)
Modeling Concepts: Time series analysis, non-stationarity, data leakage prevention, model drift, robustness analysis, cross-validation for sequential data
ML & Data: PyTorch, scikit-learn, XGBoost, NeuralProphet, NumPy, Pandas, SciPy
Infrastructure & Tools: AWS (S3, EC2, Lambda, DynamoDB), Google Cloud (Cloud Run, Cloud Storage), Postgres, SQLAlchemy, CUDA, Weights & Biases, asyncio, Git, Jira, Plotly, Matplotlib