Panagiotis Valsamis

Oberkorn, Luxembourg

LinkedIn | GitHub | Portfolio

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Professional Summary

Data Science Master's student **(ranked 3rd/25)** with expertise in statistical modeling, ML/AI, and financial analytics. Experienced in quantitative trading strategies, portfolio optimization, and risk management. Proven track record developing production-ready solutions, searching data-driven roles. *EU authorization | Greek (Native), English (C2), German (A2)*

Education

Master of Science in Data Science   09/2024 – 08/2026
University of Luxembourg   ***GPA: 16.30/20 (Ranked 3rd/25)***
- **Key Coursework:** Statistical Learning (20.0), Machine Learning (18.0), Data Visualization (18.2), Deep Learning, Time Series Forecasting, Bayesian Statistics, NLP, Supply Chain Optimization, Big Data Analytics

Bachelor in Mathematics   09/2018 – 07/2023
Aristotle University, Greece   ***GPA: 6.93/10***

Technical Projects

Quantitative Trading Strategy   *Python, ARIMAX, Time Series*   Code
- Built walk-forward ARIMAX framework generating **131% returns vs. 54%** market benchmark (2.4x outperformance, 0.71 Sharpe ratio)
- Engineered automated pipeline with rolling retraining, feature engineering (MACD, volume signals), and hyperparameter optimization
- Integrated risk analytics: Sharpe ratios, drawdown tracking, and performance diagnostics for institutional portfolio management

Portfolio Optimization & Risk Platform   *Python, Streamlit, Monte Carlo*   Code
- Developed interactive tool with **Maximum Sharpe**, **Minimum Variance**, and **Risk Parity** optimization strategies
- Built Monte Carlo engine calculating **VaR**, **CVaR**, and **Maximum Drawdown** using historical/parametric/simulation methods
- Integrated Yahoo Finance API for real-time rebalancing recommendations and performance forecasting with confidence intervals

Medical AI — ECG Arrhythmia Classification   *Python, TensorFlow, Deep Learning*   Code
- Designed custom 5-block 1D-ResNet achieving **98% accuracy** and **90% macro F1-score** on cardiac abnormality detection
- Engineered preprocessing pipeline for MIT-BIH Database with class balancing and StandardScaler normalization

Brain Tumor Classification   *Python, PyTorch, Computer Vision*   Code
- Developed hybrid 2D+1D CNN with ResNet transfer learning achieving **97% accuracy** on 4-class tumor classification
- Implemented attention mechanisms and weighted sampling to address class imbalance in medical imaging dataset

Financial Product Recommender   *Python, NMF, NCF*   Code
- Built multi-algorithm engine (FP-Growth, cosine similarity, collaborative filtering) processing 1.3M+ transactions for cross-selling
- Implemented TF-IDF vectorization and association rule mining with lift-based filtering for real-time product recommendations

Professional Experience

Banking Intern — Data & Customer Analytics   Feb 2023 – May 2023
National Bank of Greece   *Larissa, Greece*
- Analyzed customer data to identify financial needs and recommend targeted products, supporting branch cross-selling initiatives
- Studied risk assessment frameworks for insurance products and investment loans, studying loan structures and client profiling
- Assisted in tracking sales metrics and customer engagement data to optimize product offerings

Operations & Resource Management   Sep 2023 – Jun 2024
Hellenic Army   *Alexandroupolis & Athens,Greece*
- Managed budgeting, inventory control, and operational finances for 100+ daily customers
- Improved service delivery through systematic workflow optimization and resource allocation

Technical Skills & Competencies

- **Programming:** Python (Advanced), R (Advanced), SQL (Advanced) | **Databases:** MongoDB, Neo4j
- **ML/AI:** scikit-learn, TensorFlow, PyTorch, XGBoost, NLP, Computer Vision, Time Series Analysis
- **Financial Analytics:** Portfolio Optimization, Risk Management (VaR, CVaR), Quantitative Trading, ARIMA/GARCH Models
- **Data Engineering:** Apache Spark, Hadoop, Docker, Git | **Visualization:** Power BI, Matplotlib, Plotly, Seaborn, ggplot2
- **Development:** Streamlit, Flask, Jupyter, Quarto
- **Soft Skills:** Problem-Solving, Project Management, Team Collaboration, Adaptability, Critical Thinking, Time Management

Certifications

View Portfolio ⎙ — Machine Learning (Stanford), AI for Medicine (DeepLearning.AI), SQL (UC Davis), AWS, Excel, Data Viz (Johns Hopkins) | **GRE:** 76th%ile Quantitative