# Panagiotis Valsamis

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GitHub: https://github.com/ValsamisP
Portfolio: https://valsamisp.github.io/Personal-Webpage/projects

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## Professional Summary

Master's student in Data Science at University of Luxembourg (Top 3/25, GPA 16.30/20) specializing in machine learning, time series forecasting, and statistical modeling. Proficient in Python, R, SQL with hands-on experience in predictive modeling and data pipeline development.

**Languages & Authorization:** Greek (Native), English (C2), German (A2) | EU Work Authorization

## Education

**Master of Science in Data Science** 09/2024 – 08/2026
*University of Luxembourg* ***GPA: 16.30/20 (Top 3/25 in cohort)***

- **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 (Greek system, Very good standing)***

## Technical Projects

**Quantitative Trading Strategy** July 2025 – Sept 2025
*Technologies: Python, ARIMAX, Time Series* *GitHub*

- Developed automated forecasting strategy improving investment decision making by **2.4x market benchmark.**
- 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** Sept 2025
*Technologies:Python, Streamlit, Monte Carlo* *GitHub*

- Built streamlit dashboard for portfolio risk analysis and optimization 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** April 2025 – May 2025
*Technologies:Python, TensorFlow, Deep Learning* *GitHub*

- 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** July 2025 – Sept 2025
*Technologies:Python, PyTorch, Computer Vision* *GitHub*

- 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** Apr 2025 – May 2025
*Technologies:Python, NMF, NCF* *GitHub*

- Built multi-algorithm engine (FP-Growth, cosine similarity, collaborative filtering) processing 1.3M+ transactions, identified cross-selling patterns
- 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 50+ customer profiles daily to recommend insurance and investment products, contributing to branch sales targets
- Studied risk assessment frameworks for insurance products, investment loans, loan structures and client profiling
- Tracked sales conversion rates and customer engagement metrics to inform product recommendations

**Military Service/Operations & Resource Management** Sep 2023 – Jun 2024
*Hellenic Army* *Alexandroupolis & Athens,Greece*

- Managed budgeting, inventory control, and operational finances for 100+ daily customers
- Developed discipline, adaptability, and teamwork through continuous military training and operations management

**Mathematics Tutor** Sep 2022 – Feb 2023
*Thessaloniki,Greece*

- Tutored first & second year undergraduate students in Mathematics, helping them strengthen their understanding of core concepts and succeed in academic courses.

## Technical Skills & Competencies

- **Programming:** Python (Advanced), R (Advanced), SQL (Advanced), Excel (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 & Tools:** Apache Spark, Hadoop, Docker, Git, ETL pipelines | **Visualization:** Power BI, Matplotlib, Plotly, Seaborn, ggplot2
- **Development & Deployment:** Streamlit, Flask, FastAPI, Jupyter, Quarto, Model Deployment, Git , Nix
- **Soft Skills:** Problem-Solving, Project Management, Team Collaboration, Adaptability, Critical Thinking, Time Management, Communication

## Certifications

**Machine Learning Specialization** – Stanford University (Coursera), 2025
**AI for Medicine Specialization** – DeepLearning.AI, 2025
**AWS Certified Cloud Practitioner**, 2025
**Advanced Excel for Data Analysis**, 2025
**GRE Quantitative:** 76th Percentile, 2023

***Complete portfolio and all certifications at:*** https://valsamisp.github.io/Personal-Webpage/projects