Murat Koptur Data Scientist

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Profile

Highly motivated and experienced data scientist with 5 years of experience. Proficient in mathematical and statistical modeling, predictive modeling, and optimization. Skilled in creating end-to-end data science solutions, dashboards, and decision support systems. Experienced working in teams of 2-15 team members.

Professional Experience

Data Scientist, *6Zeka*
Oct 2020 – Sep 2022 | Antalya, Turkey
- Led the design and development of software architectures for ML applications, leading to efficient and effective solutions
- Conducted extensive research to identify and construct unique statistical and explainable ML models for stock and cryptocurrency markets, resulting in the successful development and testing of financial indicators and strategies for Turkish financial instruments
- Built and maintained trading decision support systems for individual traders, enabling informed and profitable trading decisions
- Developed real-time market-making and trading algorithms for FPGA boards using high-level synthesis, improving market efficiency and liquidity
- Conducted research and developed unique statistical and explainable ML models for R&D projects funded by KOSGEB and Tubitak, contributing to significant progress in project goals

Data Scientist, *Freelance*
Nov 2019 – Oct 2020 | Antalya, Turkey
- Designed and developed end-to-end ML-based applications and dashboards, improving decision-making for clients
- Created a range of ML applications for decision support, including clustering, text summarization, anomaly detection, and process mining tasks, enhancing data insights and business performance for clients

Data Scientist, *Optiwisdom*
May 2019 – Nov 2019 | Antalya, Turkey
- Contributed as a backend engineer on ML products, resulting in improved product performance and reliability
- Implemented Bayesian hyperparameter optimization, increasing model accuracy and efficiency
- Developed multiple manifold learning and metric learning algorithms, expanding model capabilities
- Conducted literature research for Tubitak-funded R&D projects, gaining a thorough understanding of current research and advancements in the field

Software Engineer, *Devexperts Turkey*
Jul 2017 – 2019 | Antalya, Turkey
- Worked as a backend developer on financial software products for the Turkish market
- Investigated, analyzed, and troubleshot software problems, resulting in improved performance and reliability of products
- Wrote automation scripts for testing and routine tasks, streamlining development and maintenance processes
- Conducted manual and automated testing procedures to ensure high-quality product delivery
- Contributed to the development of new features and enhancements for existing products

Statistician, *Freelance*
Jan 2016 – Jul 2017 | Antalya, Turkey
- Conduct data analysis and statistical modeling for clients

Education

M.Sc. in Data Analytics and Management,
Akdeniz University
Sep 2018 – Jan 2020 | Antalya, Turkey

B.Sc. in Math, *Akdeniz University*
Sep 2011 – Aug 2015 | Antalya, Turkey

Closed Source Projects

AutoTS
One-click univariate time series modelling / forecasting tool.

AutoAD
One-click anomaly detection tool.

tradesly ⌤
Roboadvisor app for BIST, FX and cryptocurrencies.

Open Source Projects

Deep Learning Examples,
Deep learning examples with Python and Tensorflow & Keras. ⌤

Unit Test C++, *Header-only unit-testing library for C++.* ⌤

Quantum computing examples with QISKit.,
Fundamental quantum computing examples. ⌤

Quantitative Finance Examples, *Financial analysis, algorithmic trading, portfolio optimization examples with Python* ⌤

Skills

Programming Languages
C++, Fortran, Go, MATLAB, Python, R, SAS/IML

Libraries/Frameworks
bnlearn, Chaospy, Dask, Dplyr, FastAPI, Flask, fiber, GEKKO, GetX, Ggplot2, gorilla web toolkit, Matplotlib, mlr, NumPy, Optuna, PyQt6, QISKit, RxDart, scikit-learn, scikit-optimize, SciPy, Stan, Tensorflow / Keras, Z3

Databases
Firestore, MariaDB, MongoDB, PostgreSQL, Redis

Visualization
Grafana, Metabase, Shiny, Streamlit

Front-end Technologies
Flutter, Svelte

Statistical / Data Analysis Software
Knime, Minitab, EViews, SAS, Stata, SPSS

Tools
CMake, Cppcheck, gdb, MLFlow, PVS-Studio, Valgrind

CI / CD / Cloud Platforms
AWS, Codecov, Cloudflare, Docker, SonarCloud, Travis CI

Interests

Biostatistics, Bayesian Statistics, Functional & Topological Data Analysis, Machine Learning & Deep Learning, Reinforcement Learning, Dynamical Systems & System Identification, Mathematical & Statistical Modeling, Time Series Analysis & Modeling