

# Fatih KAYA

## Sr. Data Scientist

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Versatile Data Scientist with over 8 years of experience in advanced analytics, machine learning, and AI. Seeking to leverage expertise in various industries, including finance, e-commerce, healthcare, airlines and digital marketing to drive data-driven decision-making and build scalable, impactful solutions.

### SUMMARY OF QUALIFICATIONS

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- **Machine Learning/AI:** Experience in machine learning, AutoML, custom ML & AI solution development.
- **Programming Proficiency:** Expert in Python, R, and SQL
- **Data Analysis & Visualization:** Proficient in Pandas, Matplotlib, Seaborn, Streamlit, Plotly Dash
- **Data Engineering:** Skilled in ETL processes, data warehousing, data lakes, and cloud computing (AWS, GCP, Azure, OracleDB, PostgreSQL).
- **Frameworks & Libraries:** Experienced with Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, LightGBM.
- **Generative AI:** Knowledgeable in OpenAI API, Ollama, Llama3, Langchain, Langgraph, CrewAI, and Agents for developing and integrating large language models and generative AI agents.
- **Marketing Analytics:** Expertise in customer segmentation, LTV calculations, purchase propensity, and Marketing Mix Modeling (MMM).
- **Continual Learning:** Commitment to staying updated with the latest advancements in data science, AI, and machine learning technologies.

### WORK EXPERIENCE

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**Sr. Data Scientist**, EETech - Boise, Idaho, USA (Remote)

January 24 – Present

- **Demand Forecasting:** Achieved 94% accuracy in predicting up/down trends for electronic components, enabling better inventory management and cost savings.
- **AI Based Data Extraction:** Utilized Large Language Models (LLMs) to extract product information from datasheets and web searches, creating an automated data filler system for client websites. This solution, 20 times faster and 100 times cheaper than traditional human-in-the-loop methods.
- **Technical Document Automation:** Implemented a PDF classifier for technical electronic component documents, achieving an 86% coverage ratio on the PDF corpus. This solution has 35% higher accuracy than manual labeling and 60% greater coverage than manual information extraction

**Head Of Data & Insights**, September 23 – May 24 Analytica House - Istanbul, Turkey (Remote)

- **Automated ML and DL Analyses:** Implemented automated machine learning and deep learning analyses to optimize clients marketing strategies with data-driven decisions.
- **Customer Segmentation & Analysis:** Merged CRM data with cookie data to enable precise customer segmentation, lifetime value (LTV) calculations, and purchase propensity
- **Advertising Optimization:** Optimized advertising audiences using channel-specific metrics and Marketing Mix Modeling, enhancing budget allocation and maximizing return on investment.

**Sr. Data Scientist**, Organon Analytics - Istanbul, Turkey (Remote)

October 22 – September 23

- **AutoML Tools Development:** Contributed to the development and testing of the "Autonon" Python library, which automates SQL operations, feature extraction, data quality management, and ML algorithms.
- **Demand Forecasting:** Led a project to predict daily food and beverage requirements for an airline company

(Pegasus), enabling optimized inventory management and improved operational performance.

- **Clinical Test Validation:** Collaborated with a medical laboratory (Biruni Labs) to apply AI in validating clinical tests during product development, enhancing the accuracy and reliability of test results, Reduce doctor dependency for clinic test validations
- **Fraud Detection:** Developed and implemented ML solutions for fraud detection in collaboration with KKB (Credit Bureau of Turkey), improving the accuracy and efficiency of fraud prevention measures.

**Sr. Data Scientist**, Analytica House - Istanbul, Turkey (Remote)

February 22 – October 22

- **Robyn MMM Implementation:** Led the first deployment of Meta's (Facebook) Robyn Marketing Mix Modeling (MMM) tool in Turkey. Utilized omnichannel data from Sneaks-Up to optimize their advertising budgets, resulting in a 20% revenue increase.
- **Team Management and Training:** Managed daily workflows and provided comprehensive training for team members, colleagues from other departments, and clients. Delivered insights into analysis techniques and technical aspects, enhancing overall team expertise.
- **AI-Based Decision Making:** Spearheaded data-driven problem-solving and decision-making through AI-based analyses for e-commerce clients, focusing on audience targeting and advertising expenditure optimization.

**Data Scientist, Financial Analyst**, Vakifbank - Istanbul, Turkey (Hybrid)

September 16 – February 22

- **Probability of Default Modeling:** Developed and refined models to predict the probability of default based on customers' financial statements and financial behaviors. Applied traditional models such as logistic regression to ensure compliance with regulations and provide interpretability.
- **Advanced ML and DL Solutions:** Implemented advanced machine learning (ML) and deep learning (DL) techniques for enhanced predictive accuracy. Compared performance across traditional and modern models, utilizing techniques such as ensemble methods and neural networks.
- **Model Validation and Comparison:** Conducted comprehensive validation and comparison of traditional and ML/DL models. Analyzed performance metrics to select the most robust model and improve default prediction accuracy.
- **Explainability and Compliance:** Addressed the challenge of explaining black box models, providing clear and interpretable insights into model decision-making processes to meet regulatory requirements and ensure transparency.
- **Financial Statement Analysis:** Gained extensive experience in analyzing financial statements, using insights to enhance model features and improve prediction accuracy.

## EDUCATION

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**Uludag University**, Turkey

Bachelor of Science – Econometry – 2010 - 2014

## SKILL HIGHLIGHTS

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**Data Visualization/Prototyping:** Google Data Studio, Plotly, Dash, Matplotlib, Seaborn, Streamlit, Django, Fastapi, Selenium, BeautifulSoup web scraping

**Techniques:** CRM Analysis, CLTV, Basket Analysis, Attribution Modeling, Credit Risk Analysis, Fraud Detection, Budget Allocation, Marketing Mix Modelling, Text Mining, Large Language Models, Transformers, LLM Agents

**Tools and Frameworks:** Python (Keras, Tensorflow, Scikit-learn, Pytorch, Pandas, Numpy, XGBoost, LightGBM, Ollama, Llama3, Langchain,, CrewAI), Hadoop, Apache Spark, SQL(MySQL, OracleDB, PostgreDB), AWS, GCP, Azure,

**Soft Skills:** Analytical thinking, Problem solving, Team work, Innovative, End-to-end approach, Continual Learning