Nazım ÇALIK

Data Scientist/Machine Learning Engineer

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Summary

Analytical thinker and collaborative **data scientist** with over **1+ year of experience** in machine learning and deep learning projects and a passion for staying up to date with developing technologies, strengthened by an **engineering culture and background**, I've completed significant projects in data science, particularly in **machine learning and deep learning**, using frameworks like **TensorFlow, Keras, and PyTorch**. I am eager to continuously learn and adapt to the rapid advancements in **data science and AI**. Proficient in **Python** and PostgreSQL, with strong skills in business and data analysis, I am adept at uncovering valuable insights from **time series data**—the lifeblood of data-driven decision-making—aligning with company strategies and objectives.

Work Experience

IME-Brands, Illinois, USA – Data Scientist

September 2023 - September 2024 Remote

- Developed **time series** models to forecast future revenue and profitability, leveraging historical data for strategic planning.
- Utilized machine learning and deep learning techniques for basket analysis, identifying frequently co-purchased products and enhancing upselling and crossselling strategies
- Engineered ML algorithms to predict Amazon's Buy Box percentage, optimizing product positioning and win rates
- Conducted sentiment analysis on product reviews using web scraping and NLP techniques to extract insights, increasing actionable customer feedback by 20% and identifying key areas for product improvement
- Developed recommendation systems based on customer preferences and purchase history, enhancing personalized recommendations and sales
- Led a computer vision project to automate image analysis and product category classification, significantly improving data processing efficiency.
- Conducted RFM and cohort analyses to segment customers, resulting in a 12% improvement in retention and identifying key patterns in customer lifecycle and engagement
- Conducted A/B tests to optimize marketing strategies, increasing sales performance by 15% and improving customer engagement metrics by 10%

Freelance Mechanical Engineer - Plastic Part Design Specialist

April 2019 – September 2023

- Designed and developed various plastic components for different industries, specializing in injection molding processes.
- Worked with clients to optimize plastic part designs for manufacturability, durability, and cost efficiency.
- Provided consulting services to companies in need of design revisions and troubleshooting for plastic part failures.
- Used Pro-Engineer/Creo software to create detailed 3D models and technical drawings.
- Managed the full design process, from concept through to prototyping and final production, ensuring client satisfaction.

VESTEL White Goods, Manisa, Turkey – Mechanical Design Engineer

October 2010 - March 2019

- Focused on key criteria such as ergonomics, functionality, and cost optimization during the product design process as a Mechanical Design Engineer,

- Aimed to develop user-friendly and functional products while keeping costs at an optimal level to deliver competitive solutions. This balanced approach ensured that the designs met both technical requirements and market needs effectively.
- Gained analytical thinking, problem solving and process optimization skills, detail-oriented approach I gained in mechanical design,

Projects:

- **Time-series forecasting with Electric Power Consumption data (various methods: LSTM, DeepAR, WaveNet, TimeGPT):**
  The goals of this study are to develop a model for forecasting household electricity usage and to determine the best forecasting period, which could be daily, weekly, monthly, or quarterly. Individual household electricity power usage is the time-series data in our investigation.This Notebook use Deep Learning and time-series data analysis methods for this aim.
- **Time-series forecasting with Electric Power Consumption data (various methods: ARIMA,SARIMA, Prophet) :**
  The goals of this study are to develop a model for forecasting household electricity usage and to determine the best forecasting period, which could be daily, weekly, monthly, or quarterly. Individual household electricity power usage is the time-series data in our investigation.This Notebook use Deep Learning and time-series data analysis methods for this aim.
- **Timeseries Forecasting with Daily_Delhi_Climate data (various methods : ARIMA,SARIMA, Prophet, LSTM, GRU):**
  In this study, it was aimed to work on weather forecasting for the Indian climate with different statistical models(ARIMA,SARIMA,prophet) and deep learning models(LSTM,GRU) with a dataset providing data from January 1, 2013 to April 24, 2017 in Delhi, India, and to monitor the performances of these models.
- **Supply Network Design(Optimization with gurobipy):**
  This exercise is a modeling example; to learn how to solve a classic supply network design problem that involves finding the minimum cost flow through a network. Given a set of factories, warehouses, and customers, you are shown how to use mathematical optimization to determine the best way to meet customer demand while minimizing transportation costs.
- **Real-Time Emotion Detection (OpenCV, FER, MTCNN, Plotly ve Streamlit):**
  The aim of this project is to detect emotions by analyzing facial expressions in real-time video streams and to represent these emotions visually. The project enables automatic and instantaneous emotional analysis to better understand human-emotion interactions.

Skills

Technical Skills: Python, Machine Learning (Scikit-Learn, Supervised and Unsupervised) , Deep Learning(Tensorflow, Keras, Pytorch), Statistics, Deployment (Streamlit ,Flask), AWS EC2, GCP (Google Cloud Platform),BigQuery, OpenCV, NLP ,Data Visualization, Tableau, PowerBI, Data Storytelling,PostgreSQL, Numpy, Pandas, EDA(Exploratory Data Analysis,Gurobi optimization,MIP(Mixed Integer Programming),MILP(Mixed Integer Linear Programming), **timeseries forecasting**(ARIMA,SARIMA,LSTM,GRU)

Soft skills: Analytical thinking, collaborative, eager to learn and inquisitive,

Education

Dokuz Eylül University – Bachelor's Degree of Mechanical Engineer

September 2002- March 2007 İzmir /Turkey

Certificates&Courses

Google Cloud Essentials Boostcamp

İstanbul Data Science Academy / September 7-23, 2024

Covered subjects below;

- Google Cloud and cloud computing.
- Google Cloud Resource Hierarchy
- Google Compute Engine, how Compute Engine works, with a focus on virtual machines and virtual networking.
- Google Cloud's five core storage options: Cloud Storage, Bigtable, Cloud SQL, Spanner, and Firestore.
- Containers, Kubernetes, Google Kubernetes Engine (GKE)
- Cloud Run, Cloud Functions

And hands-on projects below on Qwiklabs ;

- Google Cloud Fundamentals: Getting Started with Cloud Marketplace
- Getting Started with VPC networking and Google Compute Engine
- Google Cloud Fundamentals: Getting Started with Cloud Storage and Cloud SQL
- Hello Cloud Run

Big Data Training from Scratch to Fully

Udemy/ 12,5 hours

- Big Data Ecosystem
- Hadoop, HDFS, MapReduce Architecture
- Big data analysis using Apache Pig and Apache Hive
- Cloudera environment
- NoSQL databases
- MongoDB and ElasticSearch architecture, usage, integration into projects
- Apache Kafka usage
- Instant data analysis with Apache Spark, Spark SQL and Spark Streaming

Intro to Optimization Through the Lens of Data Science

Udemy / 2 hours

A comprehensive introduction to mathematical optimization and **Gurobi** tailored to data scientists and problem solvers

Covered subjects below;

- What is optimization and how can it be applied to complex problems?
- How to identify an optimization problem and translate real life into optimization models
- Learn about solvers and algorithms
- Introduction to Gurobi/gurobipy and using it in exercises and real-world problem solving

Badge of Attendance:

Gurobi Training :Optimization 202 for Data Scientist / Nov. 14-15 2024

Foreign Language:

English (Professional working proficiency)