Baran Polat

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About

As a recent graduate with advanced proficiency in Python and SQL, I specialize in Generative AI and Large Language Models. I have successfully developed industrial projects using foundation models (GPT-4, Gemini, Claude) to solve real-world business problems. Passionate about building scalable AI solutions, I am eager to leverage my skills in Prompt Engineering and software development to drive innovation within a dynamic team.

Experience

ETERNA TECHNOLOGY **Mersin,Turkey**
Data Scientist & Developer Nov 2025, Present

- Developing Python scripts for automated data extraction (ETL) and preprocessing pipelines to reduce manual data entry time by 40%.
- Optimizing machine learning model performance by conducting hyperparameter tuning and feature engineering on real-world datasets.

MINDSANE **Istanbul,Turkey**
Machine Learning Engineer Intern Aug 2025 – Sep 2025

- Implemented Reinforcement Learning algorithms for stock market forecasting simulation, achieving a 15% improvement in prediction accuracy.
- Collaborated with senior engineers to deploy ML models (YOLO) for computer vision tasks in a production-like environment.

PRODENSO INFORMATION TECHNOLOGIES **Istanbul,Turkey**
Software Engineer Intern Nov 2024 – Mar 2025

- Maintained company database systems (PostgreSQL/MySQL), ensuring 99.9% uptime through regular health checks and monitoring scripts.
- Generated automated system health reports using Python, enabling the IT team to identify potential server issues proactively.

Education

Mersin University **Mersin,Turkey**
Bachelor of Science in Computer Engineering June,2025
Relevant Coursework: Data Structures, Algorithms, Machine Learning, Database Systems.

Skills & Interests

Languages: Python, SQL, C++,Flutter.
Data Science & AI: TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, YOLO, NLP, OpenCV.
Tools & Platforms: Git, Docker, VS Code, Linux.
Languages: Turkish (Native), English (Professional).
Interests: Algorithmic Trading, Home Automation (IoT & Arduino), Kaggle Competitions.

PROJECTS

Child Dental Assistant **Python, YOLOv8**

- Secured research funding from TÜBİTAK to develop an AI-powered mobile diagnostics tool for pediatric dental health.
- Trained and fine-tuned a custom YOLOv8 model on a specialized dental dataset, achieving high precision in detecting caries and anomalies.
- Designed an automated image processing pipeline to analyze user-uploaded photos and generate instant health reports.

Financial News Sentiment & Market Analysis ***Python, NLP, Web Scraping, Pandas***

- Engineered a data extraction pipeline using Selenium/BeautifulSoup to scrape over 15,000 financial news articles.
- Implemented Natural Language Processing (NLP) techniques to classify market sentiment (Positive/Negative/Neutral), creating a dataset for algorithmic trading signals.
- Visualized correlation between news sentiment and market trends to aid in financial decision-making.

Real-Time License Plate Recognition System ***Python, YOLOv5, OpenCV***

- Developed a high-performance vehicle detection system capable of recognizing license plates in real-time video streams.
- Optimized the YOLOv5 inference process to ensure low-latency performance on standard hardware environments.
- Integrated OCR (Optical Character Recognition) to convert detected plate images into digital text format for database logging.

Precious Metal Price Forecasting (LSTM) **TensorFlow, Keras, Time-Series Analysis**

- Designed a Deep Learning model using Long Short-Term Memory (LSTM) networks to predict Gold and Silver price movements.
- Processed historical financial data and integrated technical indicators (RSI, MACD) to improve prediction accuracy by reducing noise.

Clustering & Customer Segmentation Analysis ***Scikit-learn, PCA, Unsupervised Learning***

- Applied advanced clustering algorithms (K-Means, DBSCAN) to segment complex datasets for pattern recognition.
- Utilized Principal Component Analysis (PCA) for dimensionality reduction, enabling clearer visualization of high-dimensional data.