Serhet Gökdemir

+90 531 013 93 99 | Istanbul, Turkey | serhetgokdemir@gmail.com | My Website

SKILLS

Python, Java, C, C#, GIT, SQL, HTML, CSS, Gitlab CI, Microsoft Excel, Data Analysis, Data Visualization, Machine Learning, Object Oriented Programming, Clean Coding, Problem Solving, Leadership, Teamwork

EXPERIENCE

Data Science Trainee | EPAM Systems

Nov. 2024 - Feb. 2025

For three months of intensive learning, I explored self-study materials, completed tasks, and engaged with mentors at Q&A sessions. By participating, I had the opportunity to:

- Develope skills in **software engineering** (**clean coding**, **code reviews, version control**) and **statistical analysis** (hypothesis testing, regression, data visualization).
- Learn **machine learning algorithms** (linear regression, k-means clustering, decision trees) with **Python (Scikit-learn)**.
- Explored **deep learning basics** (CNNs, RNNs) using **TensorFlow** and **Keras**.
- Gained expertise in **data preprocessing**, **feature engineering**, and **model evaluation**.

EDUCATION

Yildiz Technical University | Bachelor of Science, Mathmetical Engineering 2021 - Present

Uniwersytet Lodzki | Faculty of Mathematics and Computer Science Feb. 2024 - July 2024

Erasmus+ Study Exchange Experience

PROJECTS

Sentiment Analysis on Movie Reviews: A Machine Learning Pipeline

Developed a binary sentiment classification model to analyze movie reviews using **Natural Language Processing (NLP)** and **machine learning techniques**.

- Conducted **exploratory data analysis (EDA)** to assess data distribution and word frequency patterns.
- Implemented **text preprocessing** including **tokenization**, s**top-word removal**, and **lemmatization** using SpaCy.
- Compared **Bag-of-Words (BoW)** and **TF-IDF vectorization** methods for feature extraction.
- Trained and evaluated multiple models (**Logistic Regression**, **Random Forest**, **SVM**) to **optimize** classification accuracy.
- **Achieved 89.00% accuracy** with an optimized Support Vector Machine (SVM) model.,
- Designed a **Dockerized machine learning workflow**, including **training** and **inference pipelines** for reproducibility.
- Managed the project using **Git & GitHub**, ensuring **version control** and **clean repository structure**.
- Created detailed **documentation (README.md)** to guide setup, usage, and reproducibility.

Building Neural Networks and Custom Convolutions: Deep Learning Techniques

Built a **neural network model** using **PyTorch** and **PyTorch Lightning** to solve a **binary classification** task, **optimizing hyperparameters** and training with efficient **pipelines**.

- Designed **custom 1D** and **2D convolution functions** to **smooth noisy signals** and **process images** without relying on external libraries like **TensorFlow** or **PyTorch**.
- Applied **Sobel operators** for **edge detection** on grayscale images, highlighting structural patterns with **gradient magnitude visualizations**.
- Demonstrated advanced skills in **model training**, **custom implementations**, and **visualization** for practical **signal and image processing applications**.

LANGUAGES

Turkish, English, German