# Serhet Gökdemir

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## 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

### Iris Dataset Classification: A Dockerized Machine Learning Workflow

- Developed a **machine learning pipeline** to classify the Iris dataset into three species using **Python**, **Scikit-learn**, and **Docker**.
- Implemented a **modular architecture** with separate **training** and **inference scripts**, ensuring scalability and reproducibility.
- **Designed** and **containerized** the entire workflow using **Docker:**
- Applied **robust exception handling**, **unit tests**, and **logging for error resilience** and **debugging**.
- Achieved high accuracy (~100%) by fine-tuning **Random Forest Classifier** parameters and **addressing class imbalances**.
- Enhanced proficiency in **Docker**, **Git**, and **Python** development, including adherence to **PEP8 standards** for **clean and maintainable code**.
- **Documented the project** with a **structured README.md**, **detailing the pipeline setup**, **usage**, and **expected outcomes**.

### 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**, c**ustom implementations**, and **visualization** for practical **signal and image processing applications**.

## LANGUAGES

Turkish, English, German