# Arda Öztüner

Eskişehir

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## **Computer Engineer**

I am a **machine learning** and **deep learning** enthusiast with a keen interest in **computer vision** and **image processing**. My expertise lies in developing and deploying **neural networks** to solve challenging problems, from **medical image analysis** to **object detection**. I have hands-on experience with designing various neural networks architectures, implementing cutting-edge models, and optimizing performance for real-world applications. I am driven by curiosity and enjoy exploring new techniques to push the boundaries of what technology can achieve.

## Education

EYLÜL 2022

Computer Engineering / Eskisehir Technical University (GPA: 3,84)

EYLÜL 2023

Artificial Intelligience and Machine Learning Minor Program/ Eskisehir Technical University (GPA: 4,0)

# Skills

- Python (Pandas, NumPy, Seaborn, Matplotlib)
- ✓ Machine Learning (Scikit-learn, SciPy)
- Deep Learning (PyTorch, Tensorflow)
- ✓ Data Augmentation & Processing
- Hyperparameter Tuning
- Model Deployment (Flask, FastAPI, TorchServe)
- ✓ Model Versioning (MLflow, DVC)
- ✓ Transformers
- ✓ Computer Vision & Image Processing
- ✓ Transfer Learning
- ✓ Object Detection & Segmentation
- SQL & Database Management

## **Cert**ificates

- Python for Machine Learning, Global AI Hub
- Introduction to Machine Learning, Global AI Hub
- Fundamentals Of Deep Learning, NVIDIA
- Deep Learning A-Z, Udemy
- SQL with applications, BTK Academy

# Projects

## Brain Tumor Classification

This project focuses on classifying brain tumors from X-ray images. A combination of custom-designed **CNN** architectures and pre-trained models such as **ResNet**, **MobileNet**, and **DenseNet** were used. **Image processing** techniques such as histogram equalization and **data augmentation** were applied to improve the dataset quality.

## Scratch-Based SOM for Credit Card Fraud Detection

Implemented a **Self-Organizing Map (SOM)** from scratch to detect credit card fraud using **unsupervised deep learning**. Developed core functionalities for training, visualizing winner maps, and identifying anomalies. Applied the model to real-world credit card application data, highlighting fraudulent activities through clustering. Ensured robustness with a custom testing suite for model validation.

## ✓ Odometer Classification and Mileage Extraction

The project focuses on classifying odometer types (analog or digital) and extracting mileage from images, utilizing advanced **deep neural networks** and other cutting-edge deep learning models. The results showcase the power of deep learning models in visual data analysis, proving their ability to deliver outstanding predictions and revolutionize image-based data tasks.

## Hearth Disease Data Mining Project

In this project, **data mining methods** related to heart disease were applied to medical data, using different machine learning algorithms. By experimenting with various algorithms and parameters, the goal was to identify the best model, with a focus on **parameter optimization**. The performance of the algorithms was meticulously compared, and steps were taken to select the most efficient model based on the results.