

A Study on Artificial Neural Networks and Convolutional Neural Networks

In this project, some machine learning techniques, particularly artificial neural networks (ANNs) and their applications, will be examined in detail. Initially, the fundamental principles, architectures, and learning processes of ANNs will be explored.

During the project:

- A neural network model will be built in Matlab or Python, depending on the selected dataset.
- The created neural network will be trained with appropriate data, and its performance will be analyzed.
- The concept of image processing will be investigated, with a focus on Convolutional Neural Networks (CNNs) and their applications on visual data.

This study aims to understand machine learning techniques both theoretically and practically by exploring the data processing power and learning capacity of neural networks.