Wydział Automatyki, Elektroniki i Informatyki

Katedra Grafiki, Wizji Komputerowej i Systemów Cyfrowych

Academc year			Group	Section
2024	NSI	**BIAI**	**BDilS**	**2**
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Project card

Subject:

Mnist fashion

Main assumptions:

The purpose of this project is to evaluate the performance of various machine learning algorithms and neural network architectures on the Fashion-MNIST dataset. Fashion-MNIST, also known as MNIST Fashion, is a dataset designed for benchmarking machine learning algorithms in image recognition tasks. It was created as a more challenging alternative to the original MNIST dataset, which consists of handwritten digits. Fashion-MNIST contains 70,000 grayscale images of 10 different categories of clothing and accessories, such as t-shirts, pants, coats, dresses, and bags. Each image is 28x28 pixels in size. The dataset is divided into a training set of 60,000 images and a test set of 10,000 images.

In this project, we aim to compare the effectiveness of several classification algorithms, including traditional machine learning methods like Decision Trees and k-Nearest Neighbors, as well as more advanced techniques such as Multi-Layer Perceptron (MLP) and Convolutional Neural Networks (CNN). By analyzing the performance, accuracy, and training times of these models, we can determine which approaches are best suited for the task of fashion item recognition and what trade-offs exist between different methods.