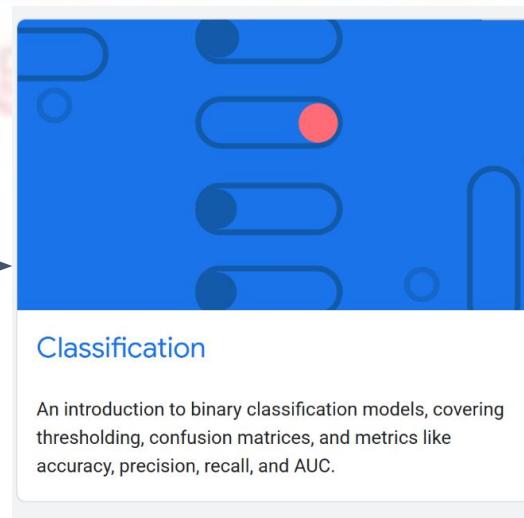


TECHCRUSH ARTIFICIAL INTELLIGENCE BOOTCAMP

Facilitator: Hammed Obasekore
September 8th, 2025

Recap



Disclaimer: This training material belongs to techcrush and shouldn't be shared

Quiz: Most Missed Question

A brief [documentation on the MNIST dataset](#) is provided in the link below. * 1 point

Determine the percentage of training and testing data predefined in the documentation.

<https://www.tensorflow.org/datasets/catalog/mnist>

- A) 90% : 10%
- B) 86% : 14%
- C) 75% : 25%
- D) 85% : 15%

mnist 

- Description:

The MNIST database of handwritten digits.

- Additional Documentation: [Explore on Papers With Code](#)

- Homepage: <http://yann.lecun.com/exdb/mnist/>

- Source code: [tfds.image_classification.MNIST](#)

- Versions:

- 3.0.1 (default): No release notes.

- Download size: 11.06 MiB

- Dataset size: 21.00 MiB

- Auto-cached ([documentation](#)): Yes

- Splits:

Split	Examples
'test'	10,000
'train'	60,000

Answer

total = train + test
train/total : test/total

Quiz: Most Missed Question

A brief [documentation on the MNIST dataset](#) is provided in the link below.

Using the default training set provided in the dataset, an AI model is to be trained with a **stochastic gradient descent** (SGD) using

Batch-Size = 10

Epoch = 100

Learning rate = 0.001

<https://www.tensorflow.org/datasets/catalog/mnist>

How many **iteration** will it take to complete **1 epoch** ?

A) 10 iterations

B) 1,000 iterations

C) 6,000 iterations

D) 1 iteration

mnist 

- Description:

The MNIST database of handwritten digits.

- Additional Documentation: [Explore on Papers With Code](#)

- Homepage: <http://yann.lecun.com/exdb/mnist/>

- Source code: [tfds.image_classification.MNIST](#)

- Versions:

- 3.0.1 (default): No release notes.

- Download size: 11.06 MiB

- Dataset size: 21.00 MiB

- Auto-cached (documentation): Yes

- Splits:

Split	Examples
'test'	10,000
'train'	60,000

Answer

no. iteration = train/batch-size

Classification: Practice - 1

Binary Classification

Understanding Dataset

Skin Cancer Binary Classification Dataset

Use Computer Vision to Detect Skin Cancer in Images



Data Card Code (11) Discussion (0) Suggestions (0)

About Dataset

Usability
7.50

The screenshot shows a machine learning application interface for binary classification. At the top right is a 2x2 confusion matrix:

		Non_Cancer	Cancer
Class	Non_Cancer	5	2
	Cancer	1	6

A color scale bar on the right indicates the count for each cell, ranging from 2 (light blue) to 6 (dark blue).

The main area displays two sections: "Non_Cancer" and "Cancer". Each section shows 42 image samples and includes "Webcam" and "Upload" buttons. To the right of these sections is a "Training" panel with the following settings:

- Model Trained
- Advanced:
 - Epochs: 50
 - Batch Size: 16
 - Learning Rate: 0.001
- Reset Defaults
- Under the hood

Below the image sections is a dashed box containing the text "Add a class". On the right side, there is a preview window showing a skin lesion image and a progress bar at 100% completion.

Disclaimer: This training material belongs to techcrush and shouldn't be shared

Classification: Practice - 1

Binary Classification

Understanding Dataset

Skin Cancer Binary Classification Dataset

Use Computer Vision to Detect Skin Cancer in Images

Data Card Code (11) Discussion (0) Suggestions (0)

About Dataset



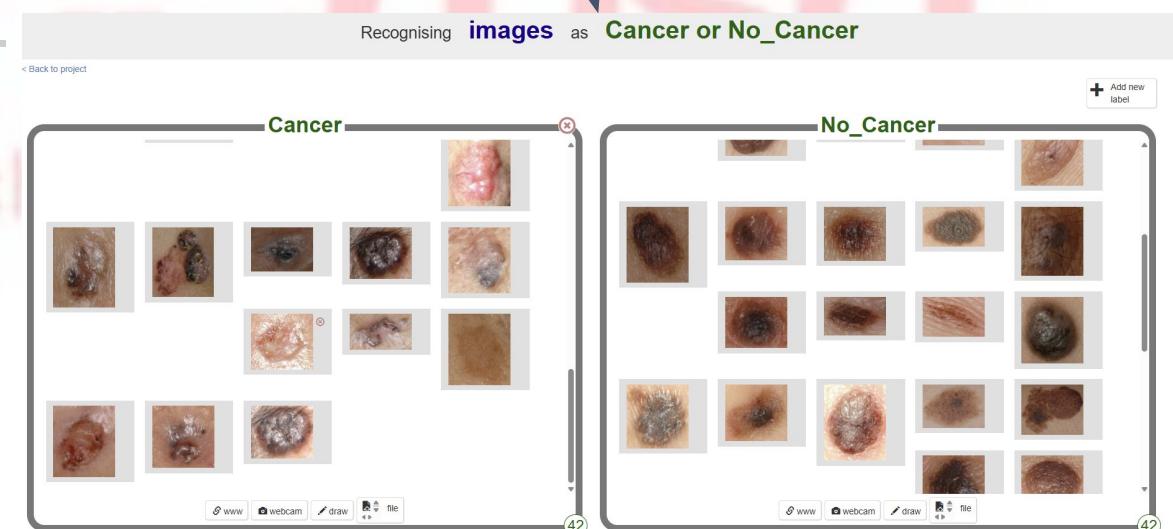
Usability
7.50

Recognising **images** as **Cancer or No_Cancer**

+ Add new label

Cancer

No_Cancer



Disclaimer: This training material belongs to techcrush and shouldn't be shared

Classification: Practice - 2

Binary Classification

Understanding Dataset

Rice Dataset Commeo and Osmancik

Rice Dataset: 2 Class Commeo and Osmancik Rice



Data Card Code (15) Discussion (2) Suggestions (0)

About Dataset

Usability
9.38

Understanding AI Report



International Journal of
Intelligent Systems and Applications in Engineering

ISSN:2147-6799

www.ijisae.org

Original Research Paper

Classification of Rice Varieties Using Artificial Intelligence Methods

Ilkay CINAR¹, Murat KOKLU²

Submitted: 24/08/2019 Accepted : 30/09/2019

Abstract: Rice being one of the most widely produced and consumed cereal crops in the world, is also the one of the main sustenance in our country because of its economical and nutritive nature. Rice, starting from farm to our table, goes through some manufacturing steps such as a cleaning process, color sorting and classification. If these stages are to be mentioned briefly, cleaning is the process of separating rice from foreign substances, classification is the process of separating broken ones with sturdy ones; color extraction is the process of separating the stained and striped ones except the whiteness on the rice surface. In this study, a computerized vision system was developed in order to distinguish between two proprietary rice species. A total of 3810 rice grain's images were taken for the two species, processed and feature inferences were made. 7 morphological features were obtained for each grain of rice. With these features, models were created using LR, MLP, SVM, DT, RF, NB and k-NN machine learning techniques and performance measurement values were obtained. Success rates in the classification were obtained 93.02% (LR), 92.86% (MLP), 92.83% (SVM), 92.49% (DT), 92.39% (RF), 91.71% (NB), 88.58% (k-NN). When we look at the results of the success rate of obtain, it is possible to say that the study achieved success.

Keywords: Classification of rice, computer vision system, image processing, machine learning system

Disclaimer: This training material belongs to techcrush and shouldn't be shared



Disclaimer: This training material belongs to techcrush and shouldn't be shared