Structured Abstract

Machine Learning Project - CSC8635

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Context

Early diagnosis in healthcare plays a critical role in disease treatment as it,contributes greatly to the recovery process of the individual. Technologies that can shorten diagnostic time and increase accuracy are becoming increasingly important.

Objective

The aim of this project is to develop a machine learning model that classifies skin lesions that can aid doctors in diagnosis.

Method

The project was developed in the framework of CRISP-DM methodology using CNN algorithms that have proven their success in computer vision such as object detection, face recognition.

Results

In the HAM10000 dataset ("Human Against Machine with 10000 training images"), the developed model achieved an accuracy of 87% in the validation set and 85% in the test set.

Novelty

In this study, the CRISP-DM methodology, known as the data mining methodology, was used, and it set an example of how the CRISP-DM methodology provides flexibility, manageability and repeatability in deep learning projects as well.