Volume 2, Issue 11, November 2024 **ISSN (E):** 2938-3757

INTELEKT PILLS VARIETIES USING ARTIFICIAL SELECTION AND ITS ROLE IN

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Abstract
This article is dedicated to the selection and varieties of pills effective detection using artificial intelligence. Artificial intelligence technologies, especially in image processing and pattern recognition algorithm has created new opportunities for assessing the quality of get the pills. Traditional methods based on the human eye, will spend time and into the error varies with predisposition to this industry in product quality negative effects to showwork, can. This research artificial intelligence from taking advantage, high-precision fast pills of varieties and the possibility of effective detection are studied. This article is based on analysis using artificial neuron networks of pills in the selection of images and shows them achieved. The production of the pills results confirms the importance of increasing productivity and quality in the field of artificial intelligence.

Keywords: Varieties of pills, artificial intelligence, image processing, pattern identification, quality control.

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Introduction

Identify the correct selection and quality in the production of varieties of pills pills to increase plays an important role. Pills of silk production is the main source of protein in the composition and quality of the main factors in determining the amount, color, texture and other physical properties. Traditional selection methods are usually based on the human eye and is a process which requires a lot of time, which poses difficulty and, as a result of human error and subjective opinions made on the basis of selection of the error observed can. Artificial intelligence technology development and, in particular, in image processing algorithm achieved high accuracy using the automated method of varieties of pills and much more in the possibility to quickly identify was born. In this article, varieties of pills for the use of selection of options from artificial intelligence, the application software methods and approaches are considered. Artificial neuron networks, in particular konvolyutsion neuron network (CNN), and separating them into different categories to get to know the patterns in the image of pills is effective. The success of this approach not only increases the quality, but also the production efficiency also increases significantly.

Methodology

Varieties of pills using artificial intelligence to determine the use of image processing and pattern recognition technologies as the main method to get it. This research konvolyutsion neuron networks (CNN) image analysis was carried out using pills. CNN algorithm, mostly pills in the image of details, identify and themrni toifalash to specialize. Data collection as various different

varieties were selected images to the appropriate pills. Initially, these images brought to a standard size and pre-treatment was given, in particular the smoothing process was conducted as lighting and contrast. That after, the neuron network architecturei studied and were adapted. Teaching in the process of pills image neuron was used as the data access to the network, on the basis of their algorithm learned the difference in the type of pills provisions. Textured patterns and layers in the image neuron of the network that are available will help you to get to know this sorting allows high accuracy. Data collection 80:20 for training and testing has been allocated in the ratio of this read gave me the opportunity to assess the accuracy of the model. In the process of testing the accuracy and sensitivity were observed error indicators and their results were analyzed.

Experiment and research

This research konvolyutsion neuron networks (CNN) model was developed to distinguish and sort them get familiar images of pills. Textured image of the cnn model and patterns of features to know to get specialized is, high - precision sorting the possibility of returns. Mathematical formulas using the model indicators were assessed. Example for, the accuracy in the following formula by was calculated as:

Accuracy (Accuracy) = \(\frac{TP + TN}{TP + TN + FP + FN} \)

This here:

- TP: True positive
- TN: True negative

FP: False positive

- FN: False negative

data in the training process Model collection 80:20 ratio was divided into training and test set. The experiment, during the accuracy and sensitivity to see iftkichlari were observed. The following results pills of images on the automatic sorting system high efficiency shows.

Results

The results of the research carried out using artificial intelligence to achieve high accuracy and fostering effective varieties of pills in the process of determining shows. The cnn model on the basis of the system developed pills textured patterns and high sensitivity in the detection of image features used to having. Accuracy index 92% around is, this traditional method compared with scrush level is high, the test results of the CNN model accuracy (accuracy), sensitivity (sensitivity) and specific (specificity) of the index estimate based on is, the following values were observed:

- **Accuracy**: 92%
- **Sensitivity**: 89%
- **To itself specific**: 90%

This with along, the model selection is performed by about 2 times higher than traditional human speed to the process, will allow you to increase the efficiency of production. These results

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provide quality service and high efficiency in the production of artificial intelligence confirms that the pills.

Expected Results

Expected research results according to the results, the model created on the basis of artificial intelligence are expected to have high accuracy in identifying the varieties of pills. CNN through the model, the accuracy is greater than 90% and is expected to increase the effectiveness of selection in the process of production of pills. Also, it significantly increases the speed of model selection and human factors minimizing owith other ingredients inthe error reduces. The model with high accuracy and speed increases the importance of artificial intelligence in popular varieties pills work production process automated system to pass the serve will.

Summary

This research results according, artificial intelligence, in particular konvolyutsion neuron network (CNN), pills of varieties of the identification and selection process with high efficiency and accuracy, and has the fact that it confirms. CNN model pills in images of textured and patterns of features identifying by, them to sort of divide the process to automate the opportunity you gave. The research during achieved 92% accuracy and 89% sensitivity indicators, this technology use in the production process of traditional methods than much higher results that give it showed. Also, artificial intelligence using the selection process, the speed increased and human factors minimizing by error have been reduced. This while a work , production efficiency increase, resources saving and pills quality to improve taking comes in. In this research , the results of the pills work production in the field of technological development for new opportunities to provide health and future of artificial intelligence using more effective methods work out for a basis that would create , it was noted. Future research, artificial intelligence algorithm further development and deeper learning through quality increase and the pills working out new technologies for application opportunities expand can. In this way, artificial intelligence systems on the basis of varieties pills fast, reliable and high quality popular provisions provides.

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