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Patent Search

Invention Title	DESIGN AND IMPLEMENTATION OF AN AUTONOMOUS GRAIN ANALYSIS AND GRADING SYSTEM
Publication Number	44/2021
Publication Date	29/10/2021
Publication Type	INA
Application Number	202141047910
Application Filing Date	21/10/2021
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	ELECTRONICS
Classification (IPC)	H04W0004029000, G06T0007000000, G08B0013196000, G01B0011240000, G06T0007620000

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Abstract:

The prototype can be used to grade any grain, oilseed, or pulse. The grains need to be put in a conveyer belt from a seed hopper and the images are captured by a PI camera. These images are sent to an OxfordNet algorithm to identify the quality of the produce. By creating a cloud bases system to store the features, images and sizes of the standard grains which the algorithm compares and gives the overall quality and the percentages of the produced in the given sample. The same model could be used with a variety of grains. We could price map each grade to determine the exact cost of the produce. The process is automated such that, there are very few chances of error and it will also improve the lives of the producers by determining the quality and getting the right price and guidance for their produce.

Complete Specification

Claims:1. A seed analysis system that uses deep learning methods to grade the quality of agricultural produce.
 2. The system of claim 1, wherein the prototype uses a conveyor belt system with a grain hopper, a camera module, raspberry pi, cloud storage and a display screen.
 3. The system of claim 1, wherein the entire system is portable with dimensions of 30cm*10cm*20cm, including the raspberry pi module.
 4. The system of claim 1, wherein the device is used for detecting the quality of all kinds of grains, irrespective of their external features.
 5. The system of claim 1. Wherein the output is in terms of percentage of different quality of grains present in the sample i.e., the output depicts the percentage of high medium or low quality of grains in the given sample.
 6. The system of claim 1. Wherein the device is portable and can be placed in any agricultural setting.
 7. The system of claim 1, wherein the device provides an accuracy of 98% irrespective of its functioning environment.
 8. The system of claim 1, wherein the proposed device will curtail the errors due to manual analysis of seeds, pulses and oil grains. , Description:The proposed model is designed and implemented to grade any kind of grains, oilseeds or pulses. A pi camera is used to capture images of the grains which is being transported on a conveyer belt system. The grains are carried by an automatic conveyer belt designed to carry grains, seeds or pulses. The captured images are fed into the Raspberry Pi based system in which a deep learning algorithm is deployed. The algorithm with the help of a standard training set detects the quality grade of the grain. The results from the algorithm will be printed on the screen that displays the respective percentages of grade and quality of the produce. Enabling the user to get an accurate description of the produce.

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Page last updated on: 26/06/2019