

Research Proposal

Identify and classify spices using deep learning and computer vision

Introduction

Spices are part of Indian History. It is the most common item that is used for cooking in any cuisine. They are also used as medicine. In Kerala, the high range areas are famous for spices and it's an earning for the layman. The price of spices varies based on the quality/ grade of the products. There is no mechanism to standardize the price based on quality. Cardamom price is controlled by the spices board, but for other spices, there is no mechanism.

Methodology

Artificial Intelligence (AI) is the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, decision-making, etc

Machine learning is a subset of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning algorithms are often categorized as supervised or unsupervised or semi-supervised learning or Reinforcement machine learning algorithms. Deep learning is a subset machine learning technique that teaches computers to do what comes naturally to humans: learn by example

Expected outcome

Using machine learning or deep learning algorithm we can able to

- Identify the different spices
- Grade a particular type of spices
- Predict the price based on the grades

Reference

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- Ferhat Kurtulmuş, Ilknur Alibas, Ismail kavdir Classification of pepper seeds using machine vision based on neural network ,International Journal of Agricultural and Biological Engineering December 2015

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