LITERATURE SURVEY

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Jimenez et al.[1] built a system that can spot spherical fruits in challenging conditions like overlapping fruit, shadows, bright areas, and occlusions in the wild. A laser range-finder sensor collects range and attenuation data, and following the recognition processes, the 3-D position of the fruit with radius and reflectance is obtained.

Faria et al. [2] presented a framework for classifier fusion for the automatic recognition of produce in supermarkets. To increase the recognition rate, they merged low-cost classifiers that had been trained on particular classes of interest.

Chowdhury et al.[3] recognized 10 different vegetables using color histogram and statistical texture features. Using a neural network as a classifier, they were able to achieve classification accuracy as high as 96.55%.

Dubey[4] proposed a system for identifying and categorizing the 15 various sorts of photos that are produced.. The approach involves segmenting an image to extract the region of interest, and then calculating the features from that segmented region, which is further used in training and classification by a multi-class support vector machine They also suggested an enhanced sum and difference histogram (ISADH) texturing feature for this type of issue.

Bulanon et al.[5]enhanced the portion occupied by fruit in images using a red chromaticity coefficient and adopted a circle detection method for classifying individual fruits.

Yang et al.[6] used the isobaric tag for a relative and absolute quantification proteomic approach to analyze differentially expressed whey proteins in the human and bovine co- lostrum and

mature milk to understand the different whey proteomes. It may provide useful information for the development of nutrient food for infants and dairy products.

Shen et al. [7]used laser- induced breakdown spectroscopy (LIBS), least squares support vector machines (LS- SVM) and LASSO models for the detection of six nutritive elements in Panax notoginseng (traditional Chinese medicine) samples from eight producing areas.

Rasouli et al.[8] applied the whole space genetic algorithm-radial basis function network (wsGARBFN) method to determine the content of micro minerals of Fe^{2+}, Zn^{2+}, Co^{2+} and Cu^{2+} in various pharmaceutical products and vegetable samples (tomato, lettuce, white and red cabbages).

Mohammed and Guda [9] used AI in the research on enzymes produced by strains of gut bacteria [42]. They developed ECemble, an approach to identify enzymes and study the Nutrients 2021, 13, 322 7 of 17 human gut metabolic pathways. ECemble uses an ensemble of machine learning methods to predict and identify the enzyme classes. They identified 48 pathways that have at least one bacteria-encoded enzyme and are involved in metabolizing nutrients.