**COMPUTER ASSISTED RESEARCH INSTITUTE FOR NUTRITION FOOD PRODUCTS**

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**INTRODUCTION**

**Computer Assisted Research Institute (CARI) system for the detection of defects in food products. As the food products are being consumed directly processed or unprocessed by human beings, defects in food products cause serious health hazards which insists to develop an inspection system which facilitates for food products of high quality and safety standards. It is cost effective technique to accomplish accurate, fast and objective quality determination.**

**The various stages of CARI system consist of pre –processing, enhancement, segmentation, feature extraction and classification. In today’s scenario consumer plays a major role in deciding the quality of products. It has become an at most important factor to drive the quality in all aspects of the product right from the Raw material to finished goods.**

**Now a day increased awareness of consumer created to improve quality in food products. It uses machine vision with the help of computer, camera and sensors. Especially in case of food industry, manufacturers need to take extreme care of the finished goods as these products are directly feed from farm to fork, most of the products are consumed directly or indirectly at the end user either human beings / animals.**

**Chances of foods products getting contaminated are very high as these manufacturing processes undergo different stages, where the Raw material is being handled by various modes.**

**PROBLEM DEFINITION**

**As the productivity of glass products are increasing day by day. It is very difficult to manage the product quality by means of Human Inspection. Because the identification of different defects by means of naked eye is not possible.**

**The steps that Involved in machine vision technology are Image acquisition, Imager-Processing, Image segmentation, Image feature extraction and Defect classification.**

**SYSTEM ANALYSIS METHODOLOGY**

**System Analysis can be defined as a part of a Structure of module,**

* **The development of feasibility study, Involving determining whether a project is economically, socially, technologically and organizationally feasible.**
* **Conducting fact-finding measures, designed to ascertain the requirements of the system’s end-users. These typically span interviews, questionnaires, or visual observation of work on the existing system.**
* **Evaluating how the end-users would operate the system, what the system would be used. System analysis is the process of observing system for troubleshooting or development purposes and to discover operation and procedures.**

**LITERATURE REVIEW**

**A Backed product is an important quality attribute, with product flavor and influencing the visual perceptions of consumers and its characteristics have been evaluated by computer vision.**

**The internal structure of bread and cake was examined by machine vision. To estimate physical features such as size, shape, backed dough color and fraction of top surface area that was chocolate chip.**

**PROPOSED SYSTEM**

**In food industry, manufacturers need to take extreme care of the finished goods as these products are directly feed from farm to fork, most of the products are consumed directly or indirectly at the end user either human beings / animals.**

**Machine vision has also been used for the detection of wrinkles, dents or other damage to aluminum cans that may cause leakage of contents.**

**MODULES**

1. **Registration, Login**
2. **Food products**
3. **Customer**
4. **Food Inspections**
5. **Grading and sorting**
6. **Computer vision QC**

INPUT DESIGN AND OUTPUT DESIGN

INPUT DESIGN:

 The input design is the link between the information system and the user. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple.

The input design considered the following things:

* What data should be given as input?
* How the data should be arranged or coded?
* The dialogue to guide the operating personnel in providing input.
* Methods for preparing input validations and steps to follow when error occur.

 Input design is the process of converting a user – oriented description of the input into a computer based system. It is achieved by creating user friendly screen for the data entry to handle large volume of data .when the data is entered it will check for its validity.

OUTPUT DESIGN

 It is the most important and direct source information to the user.

* Designing computer output should proceed in an organized, well thought out manner.
* Select methods for presenting information.
* Create document, report or other formats that contain information produced by the system.

 It conveys information about past activities, current status or projection of the future. It signals important events, opportunities, problems or warnings. Triggers an action and confirm an action.

CONCLUSION

 Computer Assisted Research Institute (CARI) For Nutrition Food Products is developed by using PHP. It has been developed. Computer vision has the potential to became a vital component of automated food processing operations as increased. Thus development of computer vision techniques such as x-ray, 3-D and color vision will be implementing.