**A Deep Learning Facial Expression Recognition Based Scoring System For Restaurants**

**Abstract:**

Recently, the popularity of automated and unmanned restaurants has increased. Due to the absence of staff, there is no direct perception of the customers' impressions in order to find out what their experiences with the restaurant concept are like. For this purpose, this paper presents a rating system based on facial expression recognition with pre-trained convolutional neural network (CNN) models. It is composed of an Android mobile application, a web server, and a pre-trained AIserver. Both the food and the environment are supposed to be rated. Currently, three expressions (satisfied, neutral and disappointed) are provided by the scoring system.

**Algorithms:**

**Haar-AdaBoost**

**Convolutional Neural Network (CNN)**

**System Architecture:**

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**SYSTEM CONFIGURATION:**

**Hardware requirements:**

Processer : Any Update Processer

Ram : Min 4 GB

Hard Disk : Min 100 GB

**Software requirements:**

Operating System : Windows family

Technology : Python 3.6

IDE : PyCharm