

PicDish Requirements Document

Functional Requirements

1. The user shall be capable of uploading a PNG formatted image (further referred as Image) to the cloud system by file selection or drag-and-drop.
2. The YOLO-based object detection (further referred as Ingredient Recognizer) shall recognize the ingredients in the Image.
3. The user shall be capable of activating Image Recognizer with the given Image by pressing a button.
4. OpenAI API (further referred as Chef) shall generate a set of recipes based of the list of ingredients detected by the Ingredient Recognizer.
5. After viewing the set of recipes, the user shall be capable of pressing the button mentioned in Requirement 3 to make Chef generate a new set of recipes.
6. The user shall be capable of viewing the ingredients in the Image and the set of recipes generated by Chef in two separate sections of the web interface.
7. The user shall be capable of accessing the system by using a web browser.

Non-Functional Requirements

1. The user shall be able to view the set of recipes in at least 5 seconds from pressing the button mentioned in Functional Requirement 3.
2. The web interface shall be intuitive and aesthetically pleasing, with a satisfaction rating of at least %90 from the users.
3. The system shall handle concurrent requests from up to 100 users without performance degradation.
4. The system shall provide at least 50 different recipes throughout usages with different Images.
5. Image Recognizer shall have a detection accuracy of at least %85.