**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 15 October 2022 |
| Team ID | PNT2022TMID37067 |
| Project Name | Project - AI-powered Nutrition Analyzer for Fitness Enthusiasts |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Form  Registration through Gmail |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Image Acquisition | Capture the Image and Check the Top and Side View of Image |
| FR-4 | Object Detection | Get a series of Bounding Boxes, which means objects are located. |
| FR-5 | Image Segmentation | Get a series of food images stored in matrix with values of background pixels replaced by zeros. |
| FR-6 | Volume Estimation | To estimate the volume, calculate the scale factors on calibration objects. |
| FR-7 | Calorie Estimation | After estimating the volume, the next step is to estimate each food’s mass |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | Informs you how nutrient dense your food is. |
| NFR-2 | **Security** | The information is visible to user only and image was secured highly. |
| NFR-3 | **Reliability** | The food packages are important for calculate the calories |
| NFR-4 | **Performance** | It is based on the package of food used for the calorie calculation |
| NFR-5 | **Availability** | It is available for all users to calculate the calorie of the foods |
| NFR-6 | **Scalability** | Increasing the calculation of the calorie in foods |