Project Design Phase-II

Solution Requirements (Functional and Non funtional)

Date	3 November 2023
Team ID	Team-592065
Project Name	Vitamin Detection using Deep learning
Maximum Marks	4 Marks

Functional requirements:

Following are the functional requirements for the proposed solution:

FR No:	Functional requirement	Sub requirement(story/task)
FR - 1	Data Ingestion and preprocessing	• The system should have diverse datasets. • The system must be preprocessed as train and test datasets.
FR - 2	Model Training	• Model selection • Fine Tuning
FR - 3	Evaluation Metrics	• Validation • Metrics reporting
FR - 4	Deployment	• Integration • Automation
FR - 5	UI interface	• Upload Interface • Results display
FR - 6	Accessibility	• The UI Interface must be easily accessible by everyone.

Non-functional requirements:

Following are the non-functional requirements for the proposed solution:

NFR No:	Non-functional requirements	Description
NFR – 1	Usability	The user interface must be intuitive, requiring minimal training for users to perform vitamin detection tasks.
NFR – 2	Security	All communication between the user interface and the backend system must be encrypted to protect user data.
NFR – 3	Reliability	The system should handle errors, ensuring that a single failure does not disrupt overall functionality.
NFR – 4	Performance	The system should be capable of processing a minimum of 100 images per minute for vitamin detection.
NFR – 5	Availability	The system should be available during standard operating hours.
NFR - 6	Scalability	The model should support scalability to accommodate an increase in the number of users and data volume.