Project Design Phase-II
3.2 Solution Requirements (Functional & Non-functional)

Date	30 june 2025
Team ID	**LTVIP2025TMID3**8419
Project Name	**GrainPalette – A Deep Learning Odyssey in Rice Type Classification Through Transfer Learning.**
Maximum Marks	4 Marks

Functional Requirements:

Functional Requirements (Customized)

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form, Gmail, LinkedIn
FR-2	User Confirmation	Confirmation via Email, OTP
FR-3	Image Upload	Upload rice grain image (JPEG/PNG format)
FR-4	Prediction	Run prediction on uploaded image and display rice type
FR-5	Admin Management	View prediction logs, manage model versions
FR-6	Model Integration	Load trained MobileNet model for rice classification
FR-7	Feedback Collection	Collect user feedback for prediction quality improvement

Non-Functional Requirements (Customized)

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	Simple and intuitive interface, accessible from both desktop and mobile devices
NFR-2	Security	Secure file upload, no storage of personal data, HTTPS communication
NFR-3	Reliability	Model should give consistent output for same input; app should not crash
NFR-4	Performance	Prediction must be generated within 3–5 seconds
NFR-5	Availability	Web application should have 99.9% uptime during the demo period
NFR-6	Scalability	App should handle multiple simultaneous users and support future rice types