

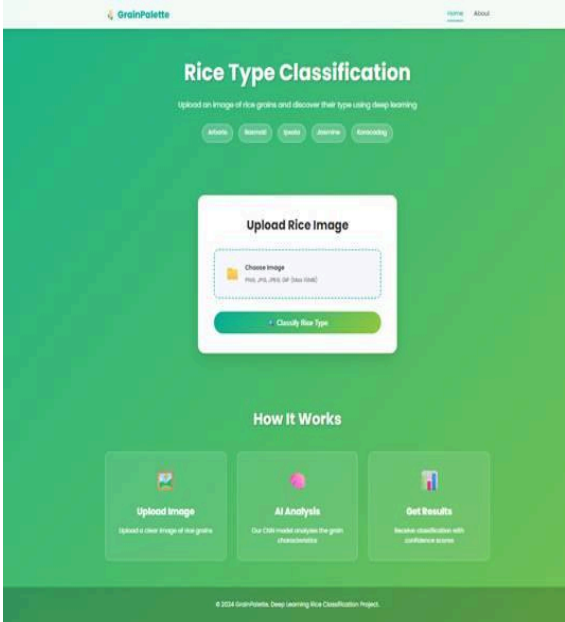
Project Development Phase

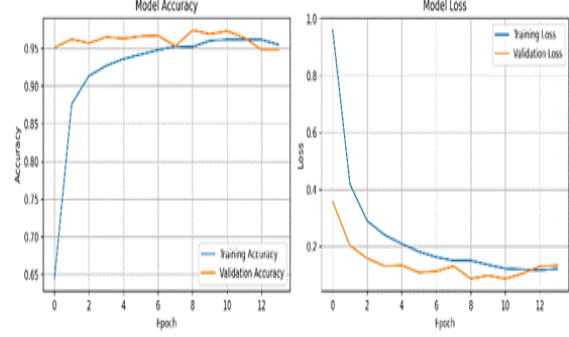
Model Performance Test

Date	30 June2025
Team ID	LTVIP2025TMID44124
Project Name	Grain Palette- a Deep Learning Odyssey in Rice Type Classification Through Transfer Learning
Maximum Marks	

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No	Parameter	Values	Screenshot
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	Model Summary	<p>📦 The model uses MobileNetV2 as a base, pre-trained on ImageNet for efficient feature extraction.</p> <p>🧠 It includes custom dense layers on top for classifying 5 rice types.</p> <p>1 2 3 4 The total parameter count is over 2.2 million, with most layers frozen for faster training.</p> <p>⚙️ Final layers are trainable, enabling accurate fine-tuning</p>	 The screenshot shows the GrainPalette web application. At the top, there's a navigation bar with the logo and links for Home and About. The main heading is "Rice Type Classification" with a subtext "Upload an image of rice grains and discover their type using deep learning". Below this are five buttons: Upload, Select, Split, Train, and Evaluate. The central part of the page features a "Upload Rice Image" section with a "Choose Image" button (labeled "Pick .png, .jpeg or .jpg (Max 10MB)") and a "Classify Rice Type" button. At the bottom, a "How It Works" section contains three steps: "Upload Image" (Upload a clear image of rice grains), "AI Analysis" (Our CNN model analyzes the grain characteristics), and "Get Results" (Receive classification with confidence score). The footer mentions "© 2024 GrainPalette, Deep learning Rice Classification Project".

		with minimal overfitting.	
	Accuracy	<p>✅ Training Accuracy steadily improved from 80% to 97% across epochs</p> <p>📈 Validation Accuracy reached up to 95%, indicating strong generalization.</p>	
	Fine Tunning Result(if Done)	<p>✅ Final Validation Accuracy achieved: 95%</p> <p>📈 Indicates the model performs well on unseen rice grain images</p> <p>🎯 Shows strong generalization with minimal overfitting</p>	