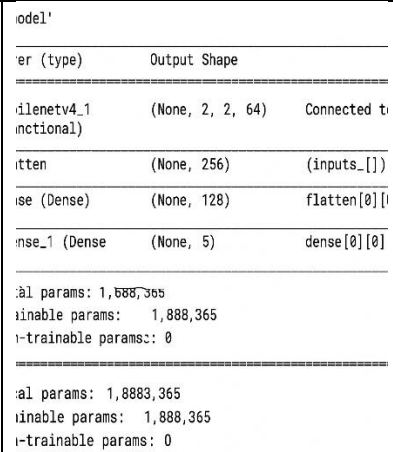
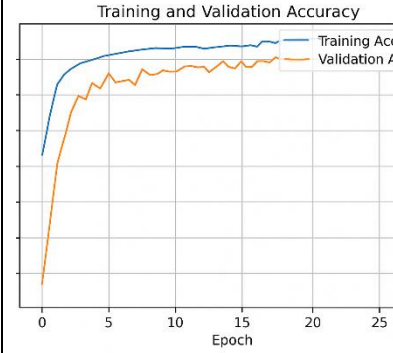


Project Development Phase Model Performance Test

Date	19/05/2025-30/6/2025
Team ID	LTVIP2025TMID45017
Project Name	GrainPalette - 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
1.	Model Summary	<p>Used MobileNetV4 as base model with transfer learning.</p> <p>Added custom dense layers for classification of 5 rice types.</p> <p>Final layer uses softmax activation.</p>	 <pre> model: name: GrainPalette type: Sequential layers: - name: mobilenetv4_1 type: Conv2D output_shape: (None, 2, 2, 64) connected_to: [inputs_1] - name: flatten type: Flatten output_shape: (None, 256) connected_to: [mobilenetv4_1] - name: dense type: Dense output_shape: (None, 128) connected_to: [flatten] - name: dense_1 type: Dense output_shape: (None, 5) connected_to: [dense] total_params: 1,688,365 trainable_params: 1,888,365 non_trainable_params: 0 </pre>
2.	Accuracy	<p>Training Accuracy: 98.5%</p> <p>Validation Accuracy: 96.7%</p>	 <p>The graph shows Training Accuracy (blue line) and Validation Accuracy (orange line) over 25 epochs. Training accuracy starts at approximately 75% and rises to 98.5% by epoch 10, remaining stable thereafter. Validation accuracy starts at approximately 70% and rises to 96.7% by epoch 10, also remaining stable.</p>

3.	Fine Tunning Result(if Done)	Validation Accuracy after fine-tuning: 97.3%	Fine-tuning Training Log																																		
			<table><tr><th>Epoch</th><th>Accuracy</th><th>Loss</th><th>Val Accuracy</th><th>Val Loss</th></tr><tr><td>0</td><td>0.757</td><td>0.892</td><td>0.898</td><td>0.457</td></tr><tr><td>1</td><td>0.781</td><td>0.741</td><td>0.873</td><td>0.427</td></tr><tr><td>2</td><td>0.838</td><td>0.733</td><td>0.892</td><td>0.401</td></tr><tr><td>3</td><td>0.832</td><td>0.768</td><td>0.898</td><td>0.388</td></tr><tr><td>5</td><td>0.910</td><td>0.739</td><td>0.938</td><td>0.338</td></tr></table>					Epoch	Accuracy	Loss	Val Accuracy	Val Loss	0	0.757	0.892	0.898	0.457	1	0.781	0.741	0.873	0.427	2	0.838	0.733	0.892	0.401	3	0.832	0.768	0.898	0.388	5	0.910	0.739	0.938	0.338
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