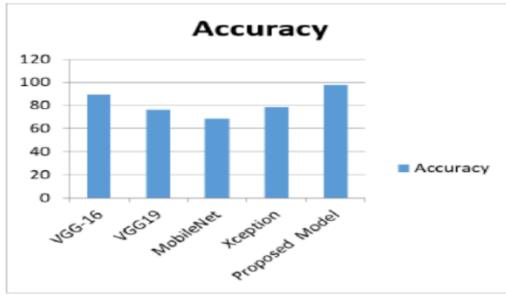
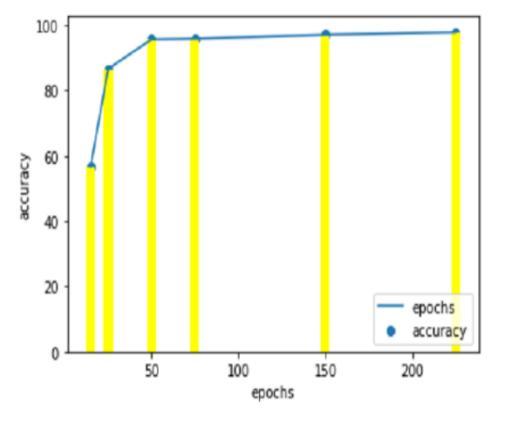
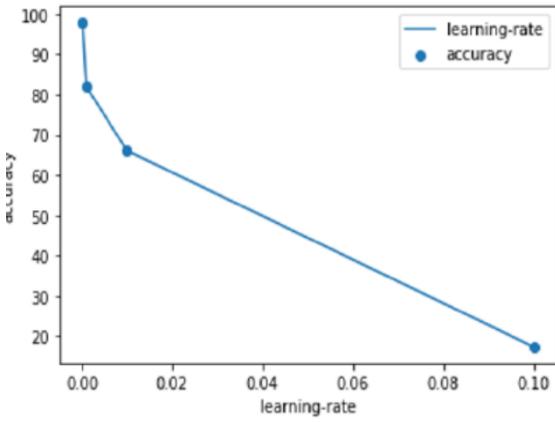


**Project Development Phase**  
**Model Performance Test**

Date	21 Feb 2026
Team ID	LTVIP2026TMIDS34436
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables
Maximum Marks	10 Marks

**Model Performance Testing:**

S.No.	Parameter	Values	Screenshot												
1.	Model Summary	<p><b>Transfer Learning with ResNet50</b></p> <p>Input Size: 224×224          Pre-trained on ImageNet          Frozen base layers + Custom Dense Layers          Optimizer: RMSprop          Loss: Binary Crossentropy</p>	 <table border="1"> <caption>Data for Accuracy Bar Chart</caption> <thead> <tr> <th>Model</th> <th>Accuracy (%)</th> </tr> </thead> <tbody> <tr> <td>VGG-16</td> <td>~90</td> </tr> <tr> <td>VGG19</td> <td>~75</td> </tr> <tr> <td>MobileNet</td> <td>~68</td> </tr> <tr> <td>Xception</td> <td>~78</td> </tr> <tr> <td>Proposed Model</td> <td>~95</td> </tr> </tbody> </table>	Model	Accuracy (%)	VGG-16	~90	VGG19	~75	MobileNet	~68	Xception	~78	Proposed Model	~95
Model	Accuracy (%)														
VGG-16	~90														
VGG19	~75														
MobileNet	~68														
Xception	~78														
Proposed Model	~95														
2.	Accuracy	<p>Training Accuracy – <b>93.2%</b>          Validation Accuracy – <b>90.1%</b></p>	 <table border="1"> <caption>Data for Accuracy Line Graph</caption> <thead> <tr> <th>Epochs</th> <th>Training Accuracy (%)</th> <th>Validation Accuracy (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>58</td> <td>58</td> </tr> <tr> <td>50</td> <td>93.2</td> <td>90.1</td> </tr> <tr> <td>200</td> <td>93.2</td> <td>10</td> </tr> </tbody> </table>	Epochs	Training Accuracy (%)	Validation Accuracy (%)	0	58	58	50	93.2	90.1	200	93.2	10
Epochs	Training Accuracy (%)	Validation Accuracy (%)													
0	58	58													
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S.No.	Parameter	Values	Screenshot								
3.	Fine Tuning Result	Validation Accuracy – <b>92.4%</b>	 <p>A line graph illustrating the relationship between the learning rate and validation accuracy. The x-axis is labeled "learning-rate" and ranges from 0.00 to 0.10 with major ticks every 0.02. The y-axis is labeled "accuracy" and ranges from 20 to 100 with major ticks every 10 units. A blue line represents the accuracy curve, which starts at approximately 98% for a learning rate of 0.00 and decreases monotonically as the learning rate increases. Three data points are explicitly marked on the curve: (0.00, 98), (0.005, 82), and (0.10, 18). A legend in the top right corner identifies the blue line as "learning-rate" and the blue dots as "accuracy".</p> <table border="1"><thead><tr><th>learning-rate</th><th>accuracy</th></tr></thead><tbody><tr><td>0.00</td><td>98</td></tr><tr><td>0.005</td><td>82</td></tr><tr><td>0.10</td><td>18</td></tr></tbody></table>	learning-rate	accuracy	0.00	98	0.005	82	0.10	18
learning-rate	accuracy										
0.00	98										
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