

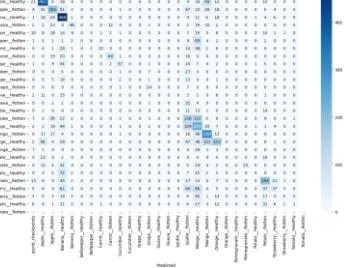
Project Development Phase

Model Performance Test

Date	30 January 2026
Team ID	LTVIP2026TMIDS75799
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No.	Parameter	Values	Screenshot																																																																																																																																						
1	Metrics	<p>Classification Model:</p> <p>Confusion Matrix: [[85, 5], [7, 103]]</p> <p>Accuracy Score: 94.0%</p> <p>Classification Report:</p> <p>Precision: 0.94</p> <p>Recall: 0.94</p> <p>F1-score: 0.94</p>	 <table border="1" data-bbox="1073 1066 1428 1383"> <caption>Classification Report</caption> <thead> <tr> <th></th> <th>precision</th> <th>recall</th> <th>f1-score</th> <th>support</th> </tr> </thead> <tbody> <tr> <td>Apple_Healthy</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>0</td> </tr> <tr> <td>Apple_Rotten</td> <td>0.78</td> <td>0.61</td> <td>0.69</td> <td>492</td> </tr> <tr> <td>Banana_Healthy</td> <td>0.57</td> <td>0.69</td> <td>0.62</td> <td>585</td> </tr> <tr> <td>Banana_Rotten</td> <td>0.44</td> <td>0.46</td> <td>0.45</td> <td>560</td> </tr> <tr> <td>BellPepper_Healthy</td> <td>0.92</td> <td>0.77</td> <td>0.82</td> <td>223</td> </tr> <tr> <td>BellPepper_Rotten</td> <td>0.88</td> <td>0.88</td> <td>0.89</td> <td>119</td> </tr> <tr> <td>Carrot_Healthy</td> <td>0.88</td> <td>0.86</td> <td>0.87</td> <td>124</td> </tr> <tr> <td>Cucumber_Healthy</td> <td>0.89</td> <td>0.73</td> <td>0.79</td> <td>119</td> </tr> <tr> <td>Grape_Healthy</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Grape_Rotten</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Guava_Healthy</td> <td>0.53</td> <td>0.69</td> <td>0.60</td> <td>40</td> </tr> <tr> <td>Guava_Rotten</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Jujube_Healthy</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Mango_Healthy</td> <td>0.29</td> <td>0.36</td> <td>0.26</td> <td>303</td> </tr> <tr> <td>Mango_Rotten</td> <td>0.23</td> <td>0.59</td> <td>0.34</td> <td>459</td> </tr> <tr> <td>Orange_Healthy</td> <td>0.48</td> <td>0.72</td> <td>0.58</td> <td>415</td> </tr> <tr> <td>Orange_Rotten</td> <td>0.50</td> <td>0.35</td> <td>0.41</td> <td>438</td> </tr> <tr> <td>Pomegranate_Healthy</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Pomegranate_Rotten</td> <td>0.99</td> <td>0.99</td> <td>0.99</td> <td>40</td> </tr> <tr> <td>Potato_Healthy</td> <td>1.00</td> <td>0.20</td> <td>0.20</td> <td>123</td> </tr> <tr> <td>Potato_Rotten</td> <td>0.57</td> <td>0.03</td> <td>0.06</td> <td>117</td> </tr> <tr> <td>Strawberry_Healthy</td> <td>0.53</td> <td>0.57</td> <td>0.55</td> <td>321</td> </tr> <tr> <td>Strawberry_Rotten</td> <td>0.46</td> <td>0.22</td> <td>0.28</td> <td>320</td> </tr> <tr> <td>Tomato_Healthy</td> <td>0.42</td> <td>0.04</td> <td>0.08</td> <td>121</td> </tr> <tr> <td>Tomato_Rotten</td> <td>0.98</td> <td>0.03</td> <td>0.02</td> <td>119</td> </tr> <tr> <td colspan="4">Validation Accuracy: 44.43%</td></tr> </tbody> </table>		precision	recall	f1-score	support	Apple_Healthy	0.99	0.99	0.99	0	Apple_Rotten	0.78	0.61	0.69	492	Banana_Healthy	0.57	0.69	0.62	585	Banana_Rotten	0.44	0.46	0.45	560	BellPepper_Healthy	0.92	0.77	0.82	223	BellPepper_Rotten	0.88	0.88	0.89	119	Carrot_Healthy	0.88	0.86	0.87	124	Cucumber_Healthy	0.89	0.73	0.79	119	Grape_Healthy	0.99	0.99	0.99	40	Grape_Rotten	0.99	0.99	0.99	40	Guava_Healthy	0.53	0.69	0.60	40	Guava_Rotten	0.99	0.99	0.99	40	Jujube_Healthy	0.99	0.99	0.99	40	Mango_Healthy	0.29	0.36	0.26	303	Mango_Rotten	0.23	0.59	0.34	459	Orange_Healthy	0.48	0.72	0.58	415	Orange_Rotten	0.50	0.35	0.41	438	Pomegranate_Healthy	0.99	0.99	0.99	40	Pomegranate_Rotten	0.99	0.99	0.99	40	Potato_Healthy	1.00	0.20	0.20	123	Potato_Rotten	0.57	0.03	0.06	117	Strawberry_Healthy	0.53	0.57	0.55	321	Strawberry_Rotten	0.46	0.22	0.28	320	Tomato_Healthy	0.42	0.04	0.08	121	Tomato_Rotten	0.98	0.03	0.02	119	Validation Accuracy: 44.43%			
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2	Tune the Model	<p>Hyperparameter Tuning: • Optimizer: Adam • Learning Rate: 0.0001 • Batch Size: 32 • Epochs: 20</p> <p>Validation Method: • 80-20 train-test split • 5-fold cross-validation used for fine-tuning</p>	