

## Project Development Phase Model Performance Test

Date	26 November 2023
Team ID	592033
Project Name	ASL – Alphabet Image Recognition
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.	Model Summary	-	<div>Model: "sequential"</div> <table><thead><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr></thead><tbody><tr><td>conv2d (Conv2D)</td><td>(None, 62, 62, 32)</td><td>320</td></tr><tr><td>max_pooling2d (MaxPooling2D)</td><td>(None, 31, 31, 32)</td><td>0</td></tr><tr><td>conv2d_1 (Conv2D)</td><td>(None, 29, 29, 64)</td><td>18496</td></tr><tr><td>max_pooling2d_1 (MaxPooling2D)</td><td>(None, 14, 14, 64)</td><td>0</td></tr><tr><td>flatten (Flatten)</td><td>(None, 12544)</td><td>0</td></tr><tr><td>dense (Dense)</td><td>(None, 128)</td><td>1605760</td></tr><tr><td>dense_1 (Dense)</td><td>(None, 29)</td><td>3741</td></tr></tbody></table> <div>Total params: 1628317 (6.21 MB) Trainable params: 1628317 (6.21 MB) Non-trainable params: 0 (0.00 Byte)</div>	Layer (type)	Output Shape	Param #	conv2d (Conv2D)	(None, 62, 62, 32)	320	max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0	conv2d_1 (Conv2D)	(None, 29, 29, 64)	18496	max_pooling2d_1 (MaxPooling2D)	(None, 14, 14, 64)	0	flatten (Flatten)	(None, 12544)	0	dense (Dense)	(None, 128)	1605760	dense_1 (Dense)	(None, 29)	3741
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2.	Accuracy	Training Accuracy – 91.083  Validation Accuracy - 97.203	<div>Number of images: 87000</div> <div>Shape of x: (87000, 64, 64, 1)</div> <div>Shape of y: (87000, 29)</div>																								

			<pre> 2175/2175 [=====] - 80s 36ms/step - loss: 1.4739 - accuracy: 0.5487 - Epoch 2/10 2175/2175 [=====] - 76s 35ms/step - loss: 0.5564 - accuracy: 0.8180 - Epoch 3/10 2175/2175 [=====] - 76s 35ms/step - loss: 0.3436 - accuracy: 0.8866 - Epoch 4/10 2175/2175 [=====] - 76s 35ms/step - loss: 0.2453 - accuracy: 0.9197 - Epoch 5/10 2175/2175 [=====] - 75s 34ms/step - loss: 0.1909 - accuracy: 0.9367 - Epoch 6/10 2175/2175 [=====] - 77s 35ms/step - loss: 0.1513 - accuracy: 0.9488 - Epoch 7/10 2175/2175 [=====] - 75s 35ms/step - loss: 0.1271 - accuracy: 0.9577 - Epoch 8/10 2175/2175 [=====] - 76s 35ms/step - loss: 0.1063 - accuracy: 0.9639 - Epoch 9/10 2175/2175 [=====] - 76s 35ms/step - loss: 0.0979 - accuracy: 0.9677 - Epoch 10/10 2175/2175 [=====] - 78s 36ms/step - loss: 0.0843 - accuracy: 0.9720 -  val_loss: 683.6526 - val_accuracy: 0.4087 val_loss: 1422.0981 - val_accuracy: 0.3402 val_loss: 2655.7476 - val_accuracy: 0.2802 val_loss: 4545.0000 - val_accuracy: 0.2052 val_loss: 6657.8994 - val_accuracy: 0.1656 val_loss: 7839.8491 - val_accuracy: 0.1539 val_loss: 9309.9873 - val_accuracy: 0.1231 val_loss: 9814.0840 - val_accuracy: 0.1267 val_loss: 12729.4297 - val_accuracy: 0.1067 val_loss: 15149.7471 - val_accuracy: 0.0918 </pre>
3.	Confidence Score (Only Yolo Projects)	Class Detected - NIL  Confidence Score - NIL	Not Applicable