

Model Development Phase Template

Date	15 March 2024
Team ID	team-739852
Project Title	Natural Disasters Intensity Analysis And Classification Using AI
Maximum Marks	10 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

Initial Model Training Code (5 marks):

Paste the screenshot of the model training code

Model Validation and Evaluation Report (5 marks):

Model	Summary	Training and Validation Performance Metrics																								
Convolutional Neural Network (CNN)	<pre> classifier = Sequential() classifier.add(Conv2D(32, (3, 3), input_shape=(64, 64, 3), activation='relu')) classifier.add(MaxPooling2D(pool_size=(2, 2))) classifier.add(Conv2D(32, (3, 3), activation='relu')) classifier.add(MaxPooling2D(pool_size=(2, 2))) classifier.add(Flatten()) classifier.add(Dense(units=128, activation='relu')) classifier.add(Dense(units=4, activation='softmax')) classifier.summary() Compile the model 25) model.compile(loss='categorical_crossentropy', optimizer='adam', metrics=['accuracy']) 26) model.summary()</pre>	<p>Model: "sequential"</p> <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>896</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, 32)</td><td>9,248</td></tr> <tr> <td>max_pooling2d_1 (MaxPooling2D)</td><td>(None, 14, 14, 32)</td><td>0</td></tr> <tr> <td>flatten (Flatten)</td><td>(None, 6272)</td><td>0</td></tr> <tr> <td>dense (Dense)</td><td>(None, 128)</td><td>802,944</td></tr> <tr> <td>dense_1 (Dense)</td><td>(None, 4)</td><td>516</td></tr> </tbody> </table> <p>Total params: 813,604 (3.10 MB) Trainable params: 813,604 (3.10 MB) Non-trainable params: 0 (0.00 B)</p>	Layer (type)	Output Shape	Param #	conv2d (Conv2D)	(None, 62, 62, 32)	896	max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0	conv2d_1 (Conv2D)	(None, 29, 29, 32)	9,248	max_pooling2d_1 (MaxPooling2D)	(None, 14, 14, 32)	0	flatten (Flatten)	(None, 6272)	0	dense (Dense)	(None, 128)	802,944	dense_1 (Dense)	(None, 4)	516
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