**Initialize the Model**

|  |  |
| --- | --- |
| Date | 11 November 2022 |
| Team ID | PNT2022TMID18696 |
| Project Name | Fertilizers Recommendation System For Disease Prediction. |

model**=**Sequential()

model**.**add(Convolution2D(32,(3,3),input\_shape**=**(128,128,3),activation**=**'relu') )

model**.**add(MaxPooling2D(pool\_size**=**(2,2)))

model**.**add(Flatten())

model**.**add(Dense(units**=**40,kernel\_initializer**=**'uniform',activation**=**'relu')) model**.**add(Dense(units**=**70,kernel\_initializer**=**'random\_uniform',activation**=**'re lu')) model**.**add(Dense(units**=**6,kernel\_initializer**=**'random\_uniform',activation**=**'sof tmax'))

model**.**compile(loss**=**'categorical\_crossentropy',optimizer**=**"adam",metrics**=**["ac curacy"])

model**.**fit(x\_train,steps\_per\_epoch**=**168,epochs**=**3,validation\_data**=**x\_test,valid ation\_steps**=**52)

Epoch 1/3

168/168 [==============================] - 45s 229ms/step - loss: 1.4802 -

accuracy: 0.4315 - val\_loss: 119.8421 - val\_accuracy: 0.5577

Epoch 2/3

168/168 [==============================] - 38s 223ms/step - loss: 1.0562 -

accuracy: 0.5982 - val\_loss: 107.7073 - val\_accuracy: 0.5288

Epoch 3/3

168/168 [==============================] - 36s 216ms/step - loss: 0.8406 - accuracy: 0.6905 - val\_loss: 97.8494 - val\_accuracy: 0.8173

<keras.callbacks.History at 0x1e34c9b7310>

model**.**save(r'C:\Users\uma25\project\flask\uploads\fruit.h5')