Model	Model Name	Result	Decision + Explanation
1	Conv3D	Train Accuracy:39% Validation Accuracy:21%	Cropped the original image by 10%, but the model is not learning efficiently. Training loss is decreasing, while validation loss is slightly increasing.
2	Conv3D	Train Accuracy:40% Validation Accuracy:24%	Reduced batch size and increased dropout in the first dense layer, but there is minimal improvement in the model's performance.
3	Conv3D	Train Accuracy:42% Validation Accuracy:29%	Cropped the original image by 3%, increased input image size and batch size, and reduced dropout. There is a negligible improvement, with training loss decreasing.
4	Conv3D	Train Accuracy:42% Validation Accuracy:29%	Cropped the image by 2%, increased input image size and batch size while keeping dropout the same. Training loss is still decreasing.
5	Conv3D	Train Accuracy:42% Validation Accuracy:29%	Reduced input image size while keeping batch size constant and using a single dropout layer at 0.25. Training loss decreases initially but then stabilizes.
6	CNNlstm_1	Train Accuracy:84% Validation Accuracy:62%	Tried ConvLSTM since Conv3D didn’t yield the desired accuracy. Increased input image size, added 5 TimeDistributed layers with 3 dense layers at 0.25. Training accuracy improved, but validation accuracy remains low.
7	CNNlstm_2	Train Accuracy:87% Validation Accuracy:72%	Increased input image size and added an extra dense layer with 0.25 dropout. Training accuracy improved slightly, and validation accuracy got better.
8	CNNlstm_3	Train Accuracy:75% Validation Accuracy:68%	Increased convolutional layers, added 2 dense layers, and reduced image size. Training and validation accuracy both decreased.
9	CNNlstm_4	Train Accuracy:85% Validation Accuracy:77%	Kept image size constant, added an extra convolutional layer with 2 dense layers. Training accuracy improved, and validation accuracy also increased.
10	GRU_lstm	Train Accuracy:95% Validation Accuracy:70%	Tested CNN-LSTM with GRU since CNN-LSTM didn’t yield the desired output. Used 4 Conv2D layers with 2 dense layers. Training accuracy is good, but validation accuracy needs improvement.
12	mobileNetModelWeight	Train Accuracy:99% Validation Accuracy:93%	Now we are usinf Employed transfer learning with GRU and trained all weights, using 3 MobileNet layers and 2 dense layers with 0.25 dropout. Achieved best training accuracy and decent validation accuracy.