

DETECTION OF CYBERBULLYING ON SOCIAL MEDIA PLATFORM

PROJECT GUIDE

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AP-CSE

TEAM MEMBERS

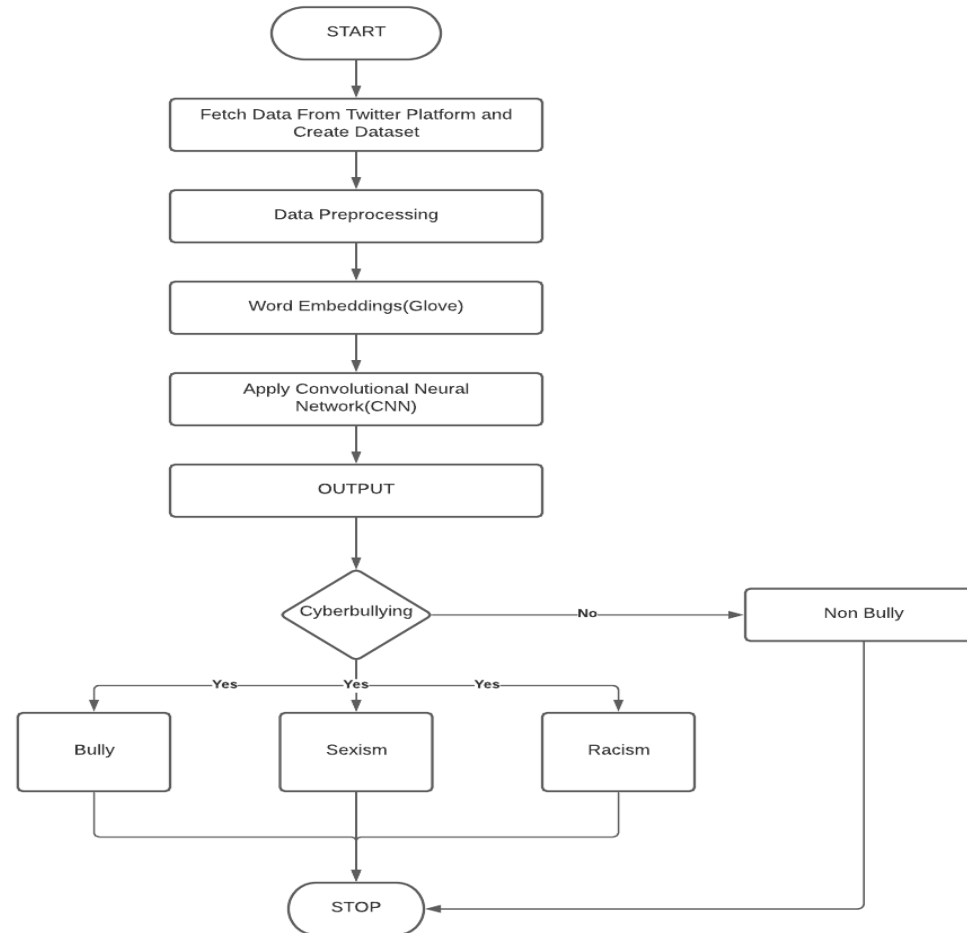
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PROJECT WORKFLOW



IMPLEMENTATION

MODEL SUMMARY

Model: "sequential"

Layer (type)	Output Shape	Param #
=====		
embedding (Embedding)	(None, 250, 100)	727300

dropout (Dropout)	(None, 250, 100)	0

conv1d (Conv1D)	(None, 248, 128)	38528

max_pooling1d (MaxPooling1D)	(None, 124, 128)	0

flatten (Flatten)	(None, 15872)	0

dropout_1 (Dropout)	(None, 15872)	0

dense (Dense)	(None, 4)	63492
=====		

Total params: 829,320

Trainable params: 829,320

Non-trainable params: 0

None

DATASET BEFORE AND AFTER PREPROCESSING

	label	tweets
0	sexism	"I want equal rights but I still want your se...
1	sexism	"Sassy - halfway between slut and classy" #MK...
2	non-bully	@GBabeuf @RJennromao @DavidJo52951945 @Novoro...
3	sexism	@GMShivers claims that only people new to the...
4	sexism	@p4ndiamond I saw him but I rarely engage mal...
...
7371	non-bully	@XaiaX I would rather it didn't. Can't we just...
7372	non-bully	Guy with the cap and Pete said.\nBye Kat and M...
7373	non-bully	And why is NBA 2K15 in my steam library? I wou...
7374	non-bully	RT @PlayHearthstone: Roses are red, \nColdligh...
7375	non-bully	@cigardubey right now? multiple browsers :P ...

7376 rows × 2 columns

	label	tweets
0	sexism	want equal right still want seat bu still pay ...
1	sexism	sassi halfway slut classi mkr mkr
2	non-bully	truth understand putin crimin
3	sexism	claim peopl new industri claim sexism exist ya...
4	sexism	saw rare engag male fem zero point follow order
...
7371	non-bully	would rather becom island
7372	non-bully	guy cap pete said bye kat minion mkr
7373	non-bully	nba k steam librari would never buy game
7374	non-bully	rose red coldlight blue murloc bad poet mrrglg...
7375	non-bully	right multipl browser p set tweetdeck

7376 rows × 2 columns

TRAINING THE DATASET

```
history = model.fit(X_train, Y_train, epochs=epochs, batch_size=batch_size, validation_split=0.1, callbacks=[EarlyStopping(monitor='val_loss', min_delta=0.001, patience=5)])
```

```
Epoch 1/25
146/146 [=====] - 12s 83ms/step - loss: 0.9940 - accuracy: 0.5740 - val_loss: 0.7810 - val_accuracy: 0.6867
Epoch 2/25
146/146 [=====] - 12s 80ms/step - loss: 0.7938 - accuracy: 0.6761 - val_loss: 0.6913 - val_accuracy: 0.7292
Epoch 3/25
146/146 [=====] - 11s 77ms/step - loss: 0.7395 - accuracy: 0.6939 - val_loss: 0.6519 - val_accuracy: 0.7524
Epoch 4/25
146/146 [=====] - 11s 78ms/step - loss: 0.7133 - accuracy: 0.7103 - val_loss: 0.6330 - val_accuracy: 0.7582
Epoch 5/25
146/146 [=====] - 11s 79ms/step - loss: 0.6733 - accuracy: 0.7266 - val_loss: 0.6230 - val_accuracy: 0.7737
Epoch 6/25
146/146 [=====] - 12s 80ms/step - loss: 0.6487 - accuracy: 0.7413 - val_loss: 0.6055 - val_accuracy: 0.7892
Epoch 7/25
146/146 [=====] - 12s 79ms/step - loss: 0.6330 - accuracy: 0.7510 - val_loss: 0.6022 - val_accuracy: 0.7834
Epoch 8/25
146/146 [=====] - 12s 79ms/step - loss: 0.6117 - accuracy: 0.7583 - val_loss: 0.5971 - val_accuracy: 0.7834
Epoch 9/25
146/146 [=====] - 12s 79ms/step - loss: 0.5969 - accuracy: 0.7570 - val_loss: 0.5939 - val_accuracy: 0.7834
Epoch 10/25
146/146 [=====] - 12s 80ms/step - loss: 0.5833 - accuracy: 0.7742 - val_loss: 0.6122 - val_accuracy: 0.7814
```


SAMPLE OUTPUT

Woo can't wait to see what happens!!! #mkr
[[0.00625993 0.6444721 0.00532781 0.34394014]] non-bully

@ArarMaher Kind of the same thing the prophet Mohammed did.
[[7.1317825e-04 4.9398992e-02 9.4877207e-01 1.1157405e-03]] racism

THANK YOU

