SafeSpace: Cyberbullying Detection

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Why?

- 95% of teens in the U.S. are online.
    - 59% of US teens have experience cyberbullying.
    - Twice likely to attempt suicide if experience cyberbullying.
    - 33% of victims experience social anxiety.

- Content moderation prevents cyberbullying.

*Statistics from https://dataprot.net/statistics/cyberbullying-statistics/

Data

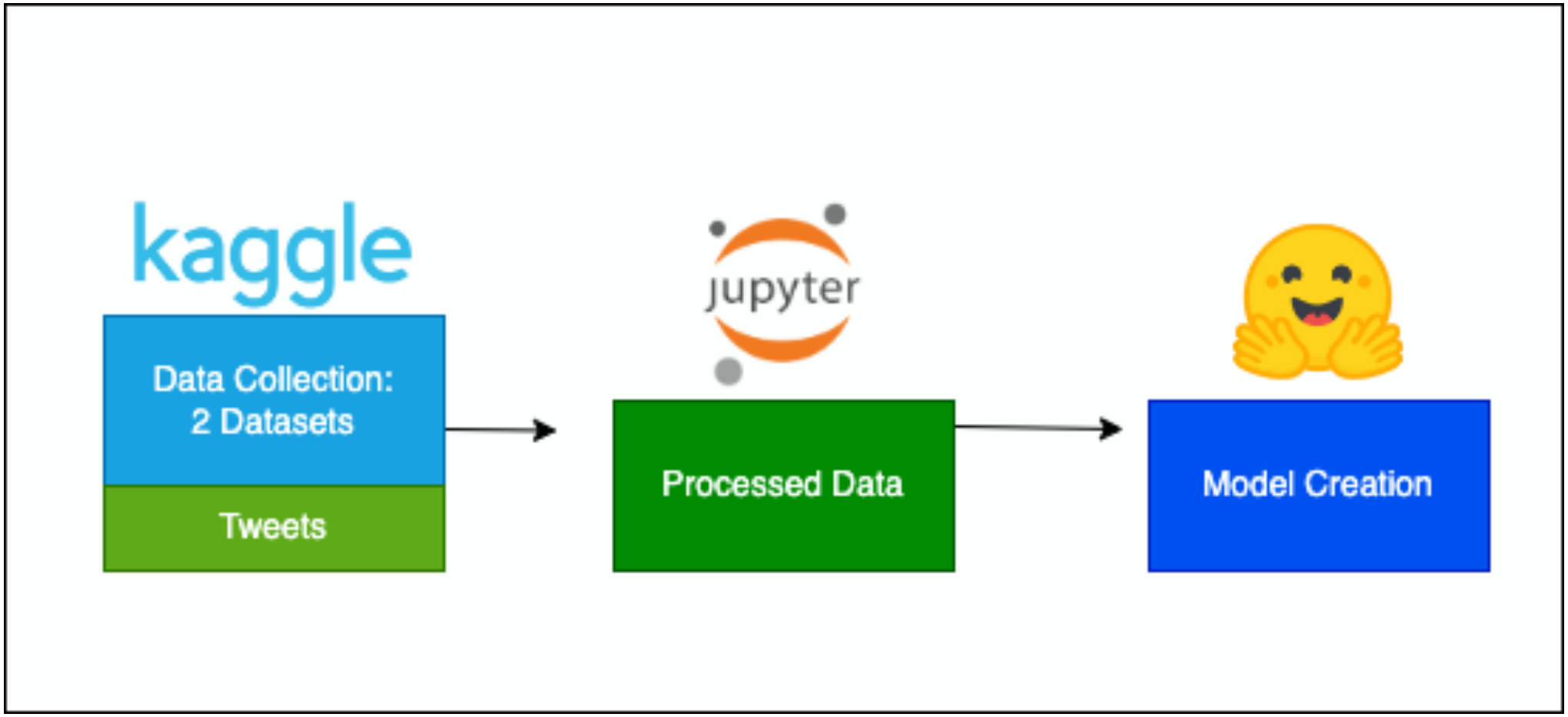
51K + LABELLED TWEETS

39K CYBERBULLYING COMMENTS, 12K NOT CYBERBULLYING COMMENTS

CLEAN AND PROCESS TWEETS BEFORE TRANSFER LEARNING

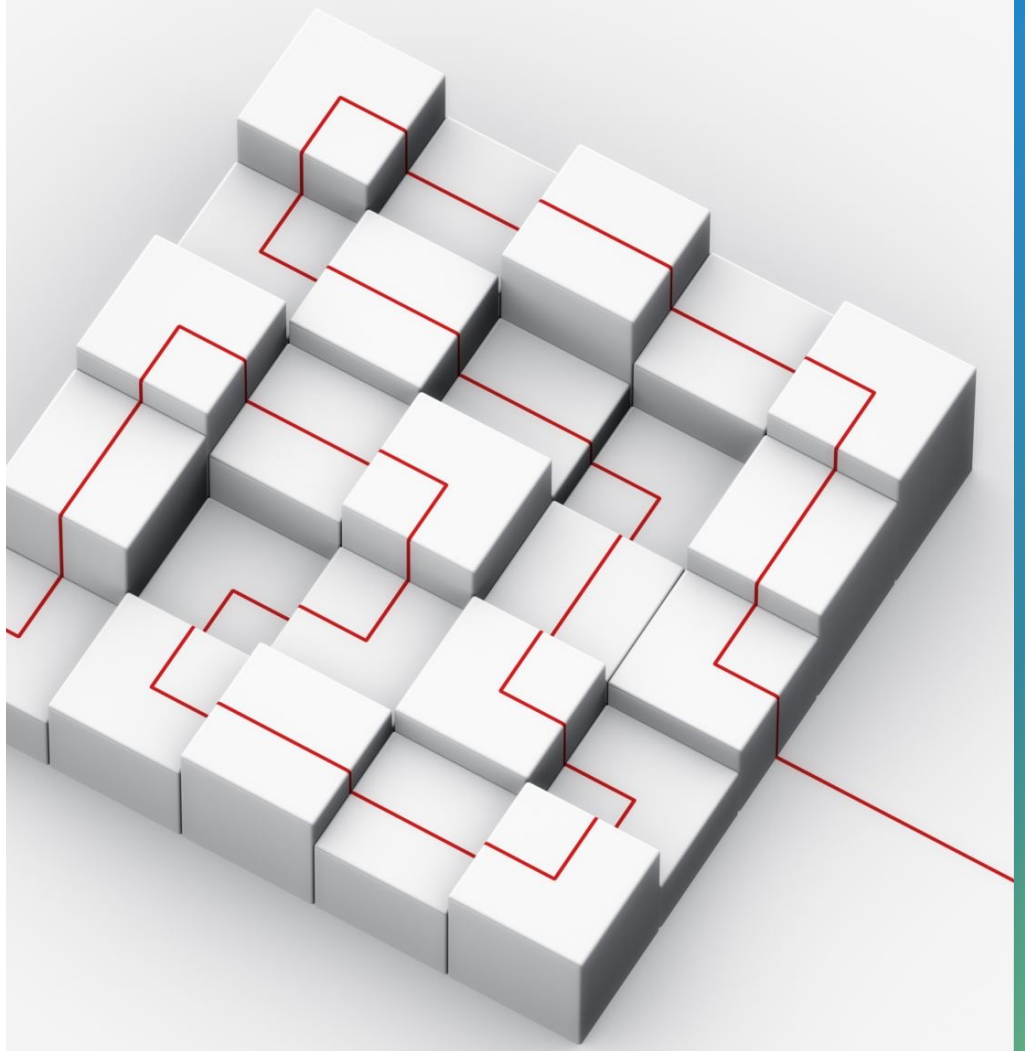
ASSESS RESULTS

How we built it?



Model

- DistilBERT
- Uses the Transformer architecture.
- Fine Tuning
- 3 Epochs



Metrics and Results

Training results

Training Loss	Epoch	Step	Validation Loss	Recall
0.2714	1.0	2599	0.2467	0.9293
0.2194	2.0	5198	0.2673	0.9475
0.1633	3.0	7797	0.3108	0.9242

Demo

- https://huggingface.co/vmarklynn/cyberbully_test_recall_v1

Git Hub Repository

https://github.com/anjumorris/detect-cyberbullying.git

Future Work and Impact

- OpenSource moderation tool for smaller communities
- Expandable to audio and video content
- Try other LLMs

Thank You