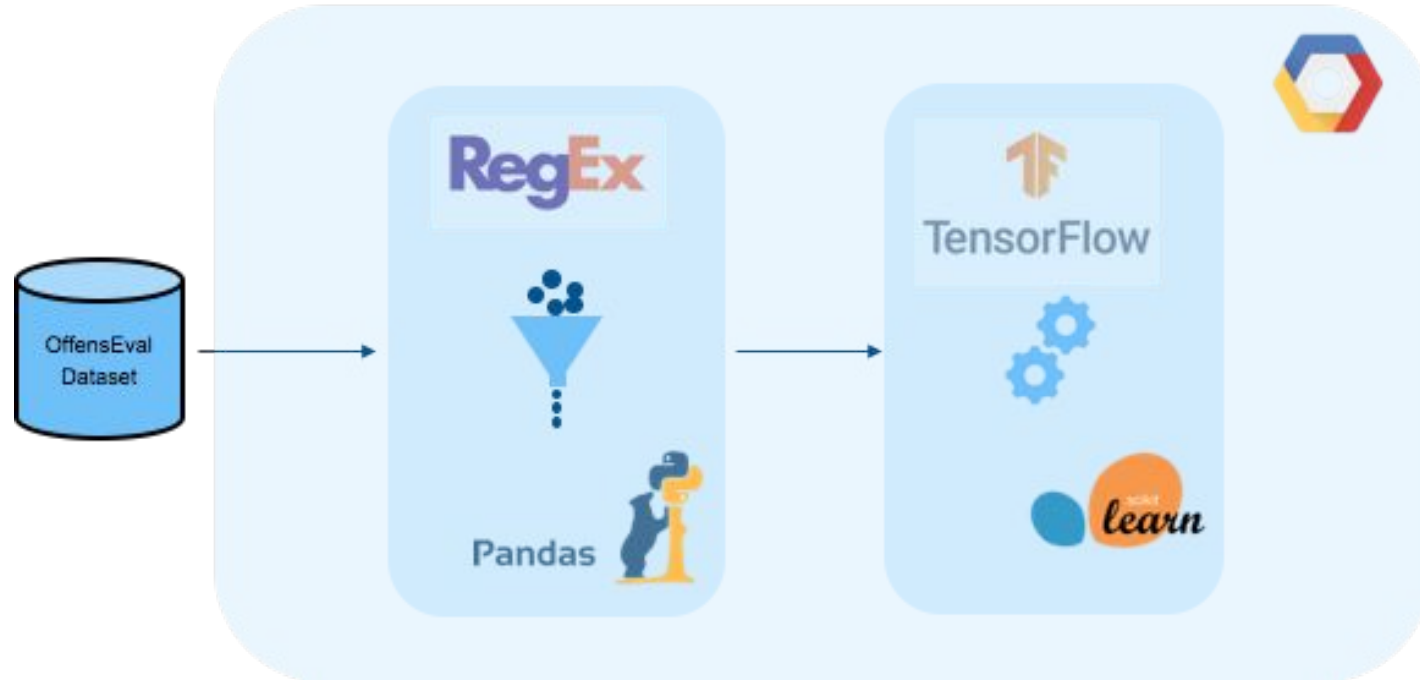


Offensive Language Identification for Twitter using BERT

International Workshop on Semantic Evaluation 2020 - Task 12: Multilingual Offensive Language Identification in Social Media (OffensEval)

Deep Learning Framework



Dataset from OffensEval

Out[7]:

	id	tweet	subtask_a
0	86426	@USER She should ask a few native Americans what their take on this is.	OFF
1	90194	@USER @USER Go home you're drunk!!! @USER #MAGA #Trump2020 🇺🇸🇺🇸 URL	OFF
2	16820	Amazon is investigating Chinese employees who are selling internal data to third-party sellers looking for an edge in the competitive marketplace. URL #Amazon #MAGA #KAG #CHINA #TCOT	NOT
3	62688	@USER Someone should'veTaken" this piece of shit to a volcano. 🌋"	OFF
4	43605	@USER @USER Obama wanted liberals & illegals to move into red states	NOT
5	97670	@USER Liberals are all Kookoo !!!	OFF
6	77444	@USER @USER Oh noes! Tough shit.	OFF
7	52415	@USER was literally just talking about this lol all mass shootings like that have been set ups. it's propaganda used to divide us on major issues like gun control and terrorism	OFF
8	45157	@USER Buy more icecream!!!	NOT
9	13384	@USER Canada doesn't need another CUCK! We already have enough #LooneyLeft #Liberals f**king up our great country! #Qproofs #TrudeauMustGo	OFF

Data Preprocessing



Advantages BERT



Context related word embedding

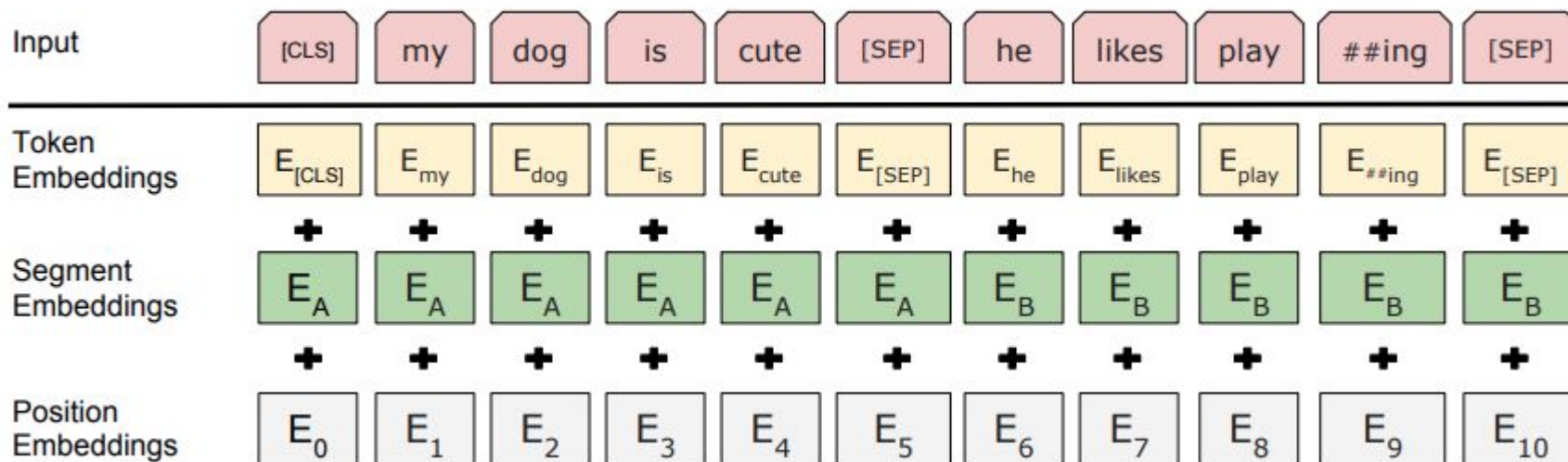


Fixed Vocab size of 30k



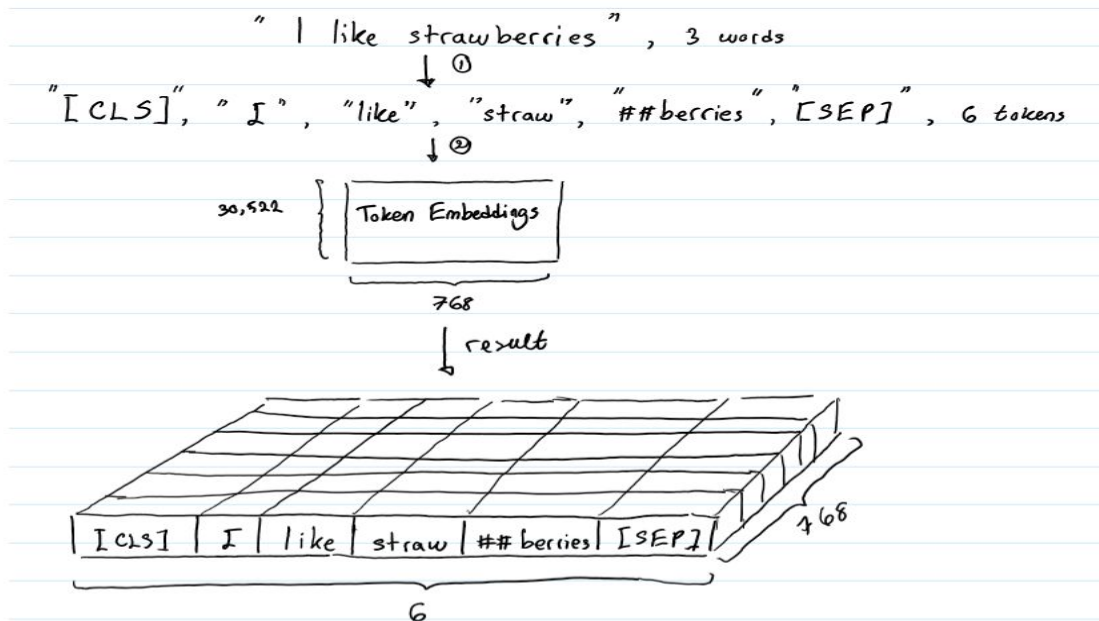
Pre-trained on Wikipedia/ Book corpus

Specific embedding layers



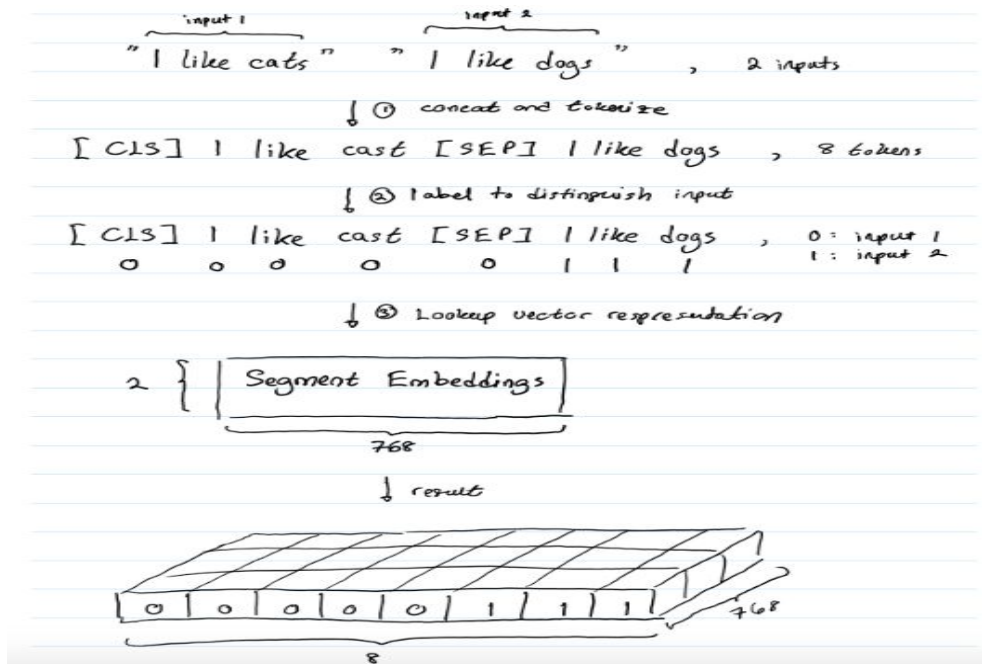
Quelle: <https://arxiv.org/pdf/1810.04805.pdf>

Token Embeddings



Quelle: <https://arxiv.org/pdf/1810.04805.pdf>

Segment Embeddings



Quelle: <https://arxiv.org/pdf/1810.04805.pdf>

Position Embbedings



I think, therefore I am.

Model Training



Learnings



NLP is fun



Pre-Processing is key



Reliable Cloud Infrastructure



Think architecture through before you start



HP tuning takes time

QUESTIONS?