THE EVOLUTION OF
TEXT EMBEDDINGS

2023 | ada002 | embeddings-v2 | embed-V3.0 | bge | GPT-4

Inspired · *Inspired* · *Evolved into*

2022 | AugCSE — *Improved by* → DiffCSE | E5 | SGPT

Inspired · *Influenced* · *Influenced* · *Influenced*

2021 | DeBERTa | DeCLUTR | SimCSE | Sentence-T5 | ALiBi

Influenced · *Influenced* · *Inspired* · *Inspired* · *Improved by*

2020 | P-SIF | VLAWE | MPNet | MobileBERT | ELECTRA | ERNIE 2.0 | XLM RoBERTa | T5 | BART | LongFormer | GPT-3

Influenced · *Inspired* · *Evolved into* · *Influenced* · *Foundation for* · *Foundation for* · *Improved by* · *Evolved into*

2019 | XLM | MASS | MegatronLM | ALBERT | XLNet | ERNIE | DistilBERT | RoBERTa | Sentence-BERT | Transformer-XL | GPT2

Variant · *Foundation for* · *Foundation for* · *Variant* · *Variant* · *Influenced* · *Foundation for* · *Evolved into*

2018 | Sentence Encoder — *Inspired* → ELMo — *Inspired* → BERT — *Inspired* → GPT | Sent2Vec

Influenced · *Foundation for* · *Inspired* · *Influenced*

2017 | InferSent | DESM | CNN-LSTM | Doc2Sent2Vec | Doc2VecC

Influenced · *Inspired* · *Improved by*

2016 | FastText | FastSent | RASM | HAN | DV-ngram | NVDM | DAE

Complementary to · *Improved by* · *Improved by*

2015 | Skip-Thought Vectors | RCNN | DAN

Inspired · *Inspired* · *Inspired*

2014 | GloVe | Doc2Vec — *Influenced* → Paragraph Vector

Parallel · *Foundation for*

2013 | Word2Vec

Foundation for

1990 | LSTM

1980 | LSA | CNN | RNN

Improved by

1970 | TF-IDF

Evolved into

1950 | Bag of Words