



Regularizing with Synthesized Graphs

Arjun Gopalan





Absence of a natural graph

No natural graph?

Build a graph!



Absence of a natural graph

No natural graph?



Absence of a natural graph

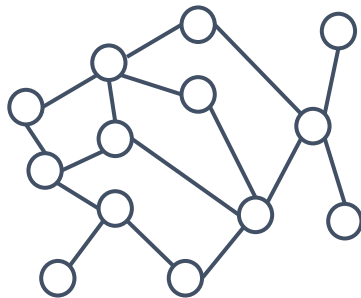
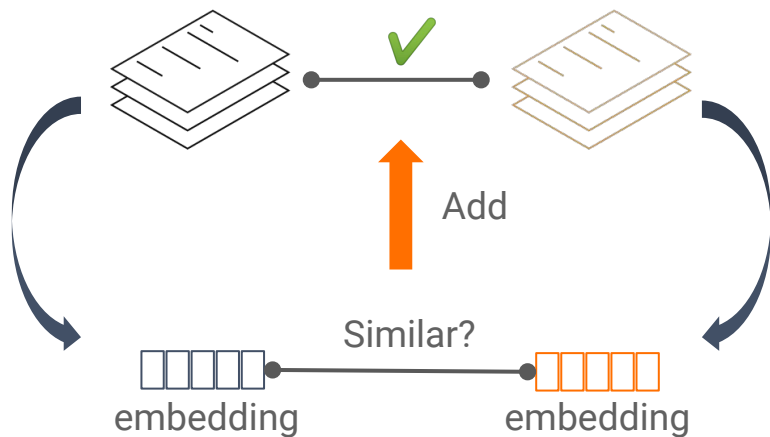
No natural graph?

Build a graph!



Graph building

➡ Find neighbors using embeddings



Graph



Graph building



Graph building



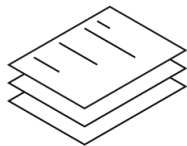
Find neighbors using embeddings



Graph building



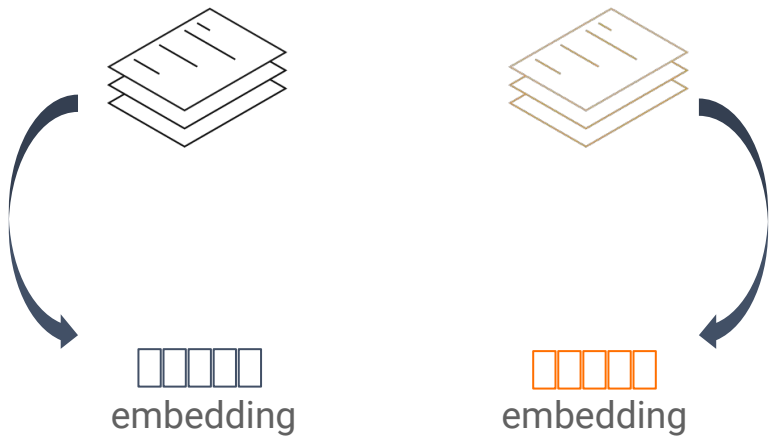
Find neighbors using embeddings





Graph building

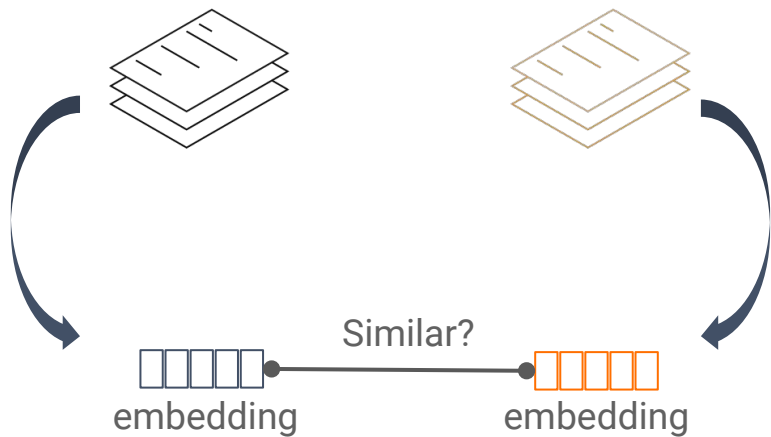
➡ Find neighbors using embeddings





Graph building

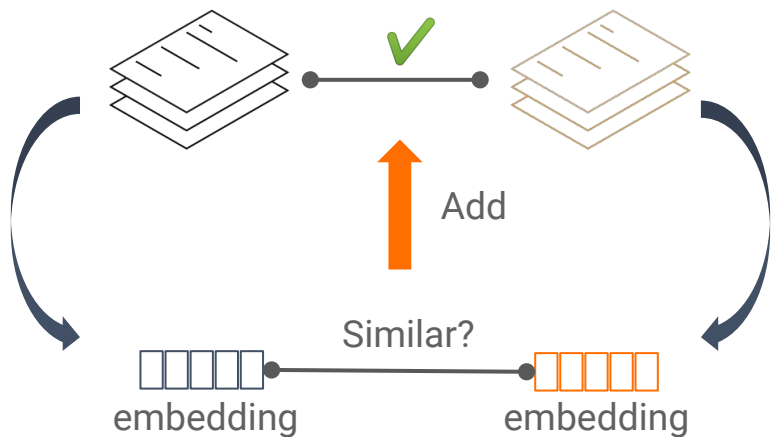
➡ Find neighbors using embeddings





Graph building

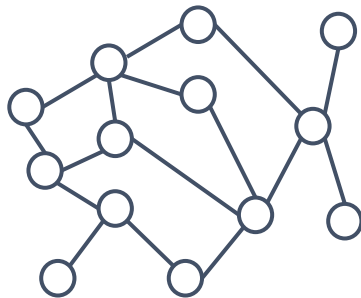
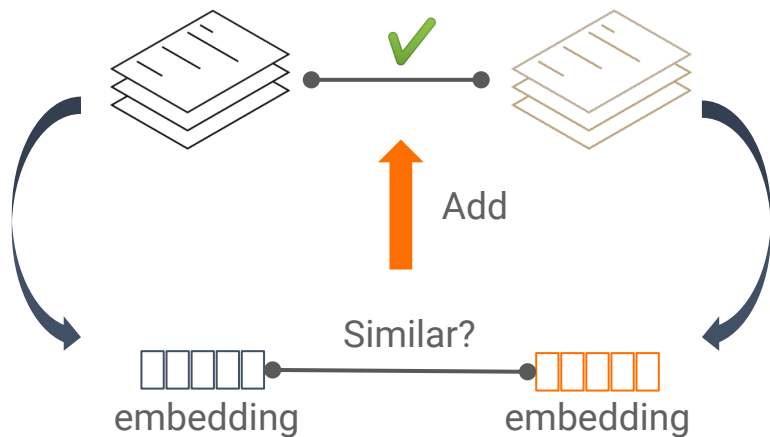
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Graph building

➡ Find neighbors using embeddings

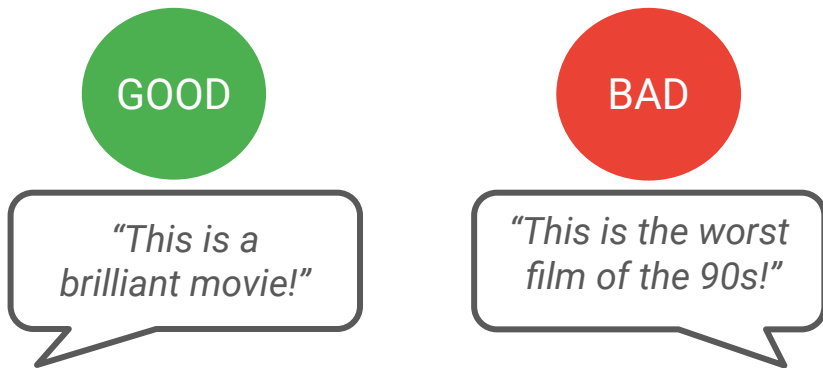


Graph



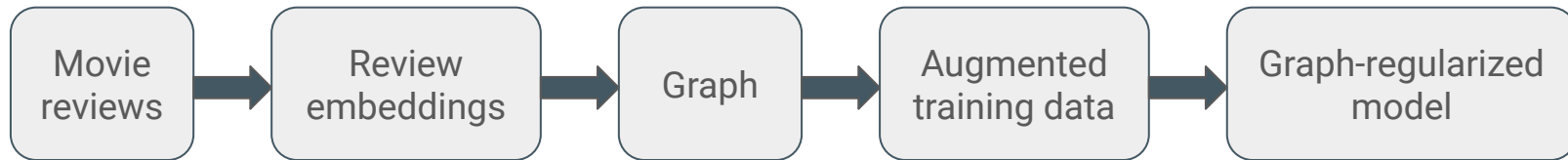
Example: Sentiment classification

IMDB dataset





Graph regularization workflow



[Colab notebook](#)