Analyze whether skeletons (or key phrases) from sentences within a given text sequence can be used for coherence modeling. We propose a new architecture called SSN that can capture similarity between sentences or skeletons. Although SSN is better than non-parametric similarity measures but sentences are much better than skeletons for coherence.

Modelling coherence is a challenging task since even humans are not perfect at it. There have been quite a few approaches to modelling coherence and some of them include entity-grid representations, domain independent models & intentional structure in coherence assessment. Motivated by the progress in this direction, through this project we test if skeletons or key-phrases within a text is a good way to measure the coherence of the text.

**Skeleton Extraction**: We use the story telling dataset to get both sentences and skeletons that are coherent and evaluate the performance of proposed SSN model
- 40153, 4990, and 5054 stories for training, validation, and testing.
- Maximum 6 sentence long

**FastText Embeddings**: We train a Facebook research FastText embeddings model for our data to get word vector embeddings

**Sentence/Skeleton Similarity Network (SSN)**: We train the above proposed model for each of sentences and skeletons and evaluate the performance based on 3 metrics
- Sentence-order accuracy: Given a pair of consecutive sentences and a pair of randomly sampled sentences, is the model able to distinguish between the two?
- Story-order accuracy: Given the original story as a list of sentences and a copy of the same story with sentence order randomized, is the model able to distinguish the two?
- Pair-classification accuracy: Given two sentences, is the model able to detect if they are consecutive (by implicitly measuring coherence) or not?

**Future Scope & Extensions**
- Evaluation on longer length datasets will provide a more conclusive result in terms of coherence detection on larger sequences of text
- We applied a very simplistic self-attention mechanism in this paper which can be extended to complicated ideas like the ones presented in Transformers.
- Evaluating the proposed SSN in detecting incoherent sentences within a text document with 1-2 sentences incoherent rather than fully ordered or jumbled stories, essays or paragraphs.