**Frequency based word embedding methods:**

1. BOW:
   1. Disadvantages:
      1. Words proportional to size of the model
      2. No synomny
2. TF-IDF
   1. Disadvantages:
      1. Polysemy
      2. Synomny
   2. Fixes:
      1. Dimensionality reduction(LSI,PLSI,LDA)
3. LSI:
   1. Solution for:
      1. Polysemy
      2. Synomny
   2. Disadvantages:
      1. Can’t change after deciding corpus at the start
4. PLSI:
   1. Solution for:
      1. Dynamic document updation
   2. Disadvantages:
      1. Overfitting
5. LDA:
   1. Solution for:
      1. Dynamic Document updation
   2. Uses:
      1. Hellinger distance
   3. Disadvantages:
      1. Overfitting

**Static word embeddings:**

1. Word2vec:
   1. Uses:
      1. CBOW
      2. Skipgram
2. GloVe:
   1. Solves:
      1. Constraints of Word2vec

**Contextual word embeddings:**

1. Contextual methods:
   1. Elmo, Bert, Xlnet
2. Word2vec:
   1. Features:
      1. Contextual embedding
      2. Less size
   2. **Problems:**
      1. Extra words cannot be added