Why Sequence Models ?

Examples:

1. Speech recognition → For a given audio clip we can output the sentence.

2. Music Generation → For a given input value(number, might be null) generates music(o/p is sequence)

3. Sentiment Classification → Given a sentence(sequence) predicts the star rating

4. DNA sequence analysis → Given a DNA sequence we find the required sequence(Protein sequence)

5. Machine Translation → For given sentence in one language we translate to another language

6. Video activity recognition → For a given video frames we predict the action happening in that frames.

7. Name Entity recognition → In a given sentence we identify the people in that sentence.

All the above are supervised learning, but the input and output length may vary also the type of input and output will differ.

Sequence data?