

# Natural language preprocessing

## Week 1

1. Tokenizer will handle the heavy lifting for us, generating the dictionary of word encodings and creating vectors out of the sentences. (`tensorflow.keras.preprocessing.text.Tokenizer`)
2. OOV token - a special token that is for words that aren't recognized, that aren't in the word index itself
3. Then convert the words in those sentences to sequences of tokens by calling the `text_to_sequences` method.
4. `tf.keras.preprocessing.sequence.pad_sequences` – pads sequences to the same length creating a matrix of preprocessed sentences

## Week 2

## Week 3

5. `tf.keras.layers.Embedding(vocab_size, embedding_dim, input_length=max_length)` – embedding layer keras
6. `tf.keras.layers.GRU()` – GRU keras layer
7. `tf.keras.layers.Bidirectional()` – Bidirectional (read the whole sentence from start to the end and vice versa)
8. `tf.keras.layers.LSTM(64, return_sequences=True)` – Lstm layer Keras