

Lecture 4

What is embeddings?

An **embedding** is a way to turn words, sentences, or even bigger pieces of text into numbers (vectors) so that computers can understand their meaning.

- Words with **similar meanings** end up with **similar numbers**.
- For example: the words *“king”* and *“queen”* will have vectors that are close together, but *“king”* and *“banana”* will be far apart.

An **encoder** takes input (like text, image, or audio) and converts it into a **numeric representation (vector/embedding)** that captures its important features or meaning.