Difference between CNN and RNN

CNN:

1. CNN take a fixed size input and generate fixed-size outputs.

2. CNN is a type of feed-forward artificial neural network - are variations of multi-layer perceptrons which are designed to use minimal amounts of preprocessing.

3. CNNs use connectivity pattern between its neurons is inspired by the organization of the animal visual cortex, whose individual neurons are arranged in such a way that they respond to overlapping regions tiling the visual field.

Use CNNs For:

1. Image & video data
2. Classification prediction problems
3. Regression prediction problems

RNN:

1. RNN can handle arbitrary input/output lengths.

2. RNN unlike feedforward neural networks - can use their internal memory to process arbitrary sequences of inputs.

3. RNNs are unfolded into a finite sequence of hidden units, each of which depends both on the previous hidden unit and the input.

Use RNNs For:

1. Text data
2. Speech data
3. Classification prediction problems
4. Regression prediction problems
5. Generative models