M5L3 Exercises

May 1, 2023

Exercise 10

a. What are deep sequence modeling and its categories?

b. Train a one-to-one sequence LSTM model for a given dataset

X = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20]

y = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200]

c. Train the model with stacked LSTM layers using the above dataset. Use atleast one additional layer when compared to (b).

d. Train a one-to-one sequence LSTM Model with multiple features for the dataset given below

X1 = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40]

X2 = [3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60]

y = [6, 24, 54, 96, 150, 216, 294, 384, 486, 600, 726, 864, 1014, 1176, 1350, 1536, 1734, 1944, 2166, 2400]

e. Train the model with stacked LSTM layers using the above dataset. Use atleast one additional layer when compared to (d).

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