Welcome to Week 4

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Learning Objectives

- The main objective of this lecture is to introduce *Recurrent Neural Network* (RNN), one of powerful neural network architecture for sequential data analysis.
- In Week 4, you will learn
  - the architecture of recurrent neural network (RNN);
  - optimizatoin: backpropagation through time;
  - numerical implementation of RNN on the Limit order book prediction using Python.

Supplementary material

- You may refer to Chapter 5 of my book [1] (Chinese version) and [2] (English version) for more detailed information of RNNs.
- The code examples can be found at the Chapter5_NeuralNetwork/Section5.2_RNN.ipynb at the link `https://github.com/deepintomlf/mlfbook`.

Thanks for your attention!

References I


Hao Ni, Xin Dong, Jinsong Zheng, and Guangxi Yu.
An Introduction to Machine Learning in Quantitative Finance (Chinese version).
Tsinghua University Press, 2021.


Hao Ni, Xin Dong, Jinsong Zheng, and Guangxi Yu.
An Introduction to Machine Learning in Quantitative Finance (English version).
World Scientific, 2021.