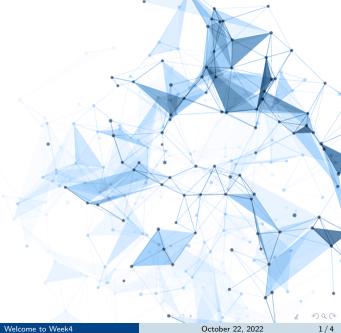
Welcome to Week 4



Hao Ni University College London The Alan Turing Institute



Hao Ni (UCL and ATI) Welcome to Week4

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

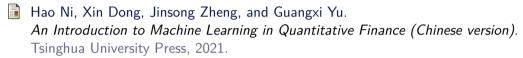
- You may refer to Chapter 5 of my book [1] (Chinese version) and [2] (English version) for more detailed information of RNNs.
- The code examples can be found at the Chapter5_NeuralNetwork/Section5.2_RNN.ipynb at the link https://github.com/deepintomlf/mlfbook.



Thanks for your attention!

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References I



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

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