BDA 5-22

1 Hello everyone, I am Haiying Che, from Institute of Data Science and knowledge Engineering

School of Computer Science, in Beijing Institute of Technology, In this chapter we will learn some popular algorithms of data analysis

2 Generally Big data processing algorithm basically include data mining algorithms and Machine learning algorithms.

Data mining algorithms can be categorized into 4 groups, classification, clustering, correlation Analysis and anomaly detection.

Machine learning algorithms include supervised learning, unsupervised learning, semi-supervised learning and reinforcement learning.

And in the scope of supervised learning there are regression, classification, and deep learning.

And in the scope of unsupervised learning there are clustering, dimensionality reduction, and anomaly detection.

For semi-supervised learning, it includes self-training and low-density separation models.

and reinforcement learning include dynamic programming and Monte Carlo methods.

3

In this chapter we will explain 8 popular algorithms, include **Linear Regression,** **k-means Clustering, k-nearest neighbor, Naive Bayes algorithm, Apriori algorithm, Support Vector Machine, Convolutional Neural Network, Principal Component Analysis.**

**And we will use the Youtube videos to explain the algorithms which is with more animation and easier to understand.**

4

In this session, we will learn **Linear Regression algorithm.**

5

In this session, we will learn **K-means Clustering algorithm.**

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In this session, we will learn **K-nearest neighbor algorithm.**

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In this session, we will learn **Naive Bayes algorithm.**

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In this session, we will learn **Apriori algorithm.**

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In this session, we will learn **Support Vector Machine.**

10

In this session, we will learn **Convolutional Neural Network,CNN.**

11

In this session, we will learn **Principal Component Analysis PCA.**

12

In all this chapter we learned the popular algorithms of data analysis

Thank you for your attention and if you have any question, feel free to contact me.