

Introduction to Association Rule Mining

Introduction to Association Rules

- Substantial part of every E-Commerce and Supermarket

Frequently Bought Together



Total price: \$92.20

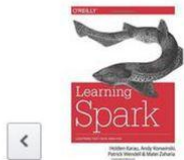
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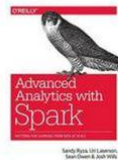
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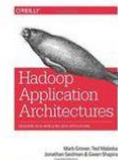
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Introduction to Association Rules

- Supermarket & Market Basket Analysis



Association Rule Mining: Formal Definition

- Commonly used for shopping behavior analysis
 - aims at detection of rules such as
"If a customer purchases baby food then he also buys diapers in 70% of the cases"

Baby Food



Diapers























What is Association Rule Mining?

- Motivation: finding regularities in data
 - What products are often purchased together in a supermarket?
 - What are the subsequent purchases after buying a PC?
 - Is there a serious chance of Covid-19 patients to suffer a heart attack?
 - Do people who read news about Trump are also interested in NFL?

Market Basket Analysis

- Retail organizations e.g. Supermarkets collect and store massive amounts of sales data called Basket Data
- A record consist of
 - Transaction date/ID
 - Items bought

Transaction 1	   
Transaction 2	  
Transaction 3	 
Transaction 4	 
Transaction 5	   
Transaction 6	  
Transaction 7	 
Transaction 8	