Topic: Association Rule Mining

Aim: Getting practices with Data Preprocessing

Getting practices with Association Rule Mining

Task: Data Preprocessing

Data cleaning

Data Discretization

Question 01:

The description of Bank.csv is given here,

Attribute	**Description**
id	a unique identification number
age	age of customer in years (numeric)
sex	MALE / FEMALE
region	inner_city/rural/suburban/town
income	income of customer (numeric)
married	is the customer married (YES/NO)
children	number of children (numeric)
car	does the customer own a car (YES/NO)
save_acct	does the customer have a saving account (YES/NO)
current_acct	does the customer have a current account (YES/NO)
mortgage	does the customer have a mortgage (YES/NO)
pep	did the customer buy a PEP (Personal Equity Plan) after the last mailing (YES/NO)

i. Import the data set into Weka

ii. Visualize All the attribute and interpret the result

iii. Visualize the scatter plot of the attribute and explain the attribute relations

iv. Convert the Bank.csv file format to Bank.arff and reopen the Bank.arff file.

v. Preprocess the source file

vi. Convert the numerical value to nominal data type.

vii. Change the data label of the converted nominal data type.

viii. Reopen the edited resource file

ix. Apply the association rule mining ‘Apriori’

x. Explain the out put that gain from association rule mining

xi. Find the relation with PEP attribute When PEP is no and PEP is yes

xii. Set the class attribute as marital status

Question 02

The Given Iris Plants Database.csv file contains the attribute of Iris Plants. There’re five attributes about the plant which are, sepal length in cm, sepal width in cm, petal length in cm, petal width in cm, and class.

i. Import the data set into Weka

ii. Visualize All the attribute and interpret the result

iii. Visualize the scatter plot of the attribute and explain the attribute relations

iv. Preprocess the source file

v. discretize all the attribute.

vi. Change the data label of the converted nominal data type.

vii. Apply the association rule mining ‘Apriori’ and set the class attribute as class

viii. Explain the association rule mining