

item	β_1	β_2	β_3	β_4	β_5	β_6	β_7	β_8
first group	0.0676	0.0901	0.0691	0.2146	0.0767	0.1504	0.1989	0.1327
second group	0.0774	0.1004	0.0749	0.2211	0.0801	0.1420	0.1836	0.1208
third group	0.0773	0.0991	0.0741	0.2105	0.0799	0.1590	0.1901	0.1102
average	0.0741	0.0965	0.0727	0.2154	0.0789	0.1505	0.1908	0.1212

The total weight of each behavior attribute in descending order is as follows:

$$B_4 \rightarrow B_7 \rightarrow B_6 \rightarrow B_8 \rightarrow B_2 \rightarrow B_5 \rightarrow B_1 \rightarrow B_3$$

As the result shows, it is easy to know that B_4 , B_7 , B_6 , B_8 are the key attributes among 8 kinds of behavior attribute. That is to say regional limits, criminal record, income and bad habits are very important attributes when the police detect cases.

5. Conclusions

By the solution of this model, it is clear to see that when the population change is considered, the linear regression model could co-ordinate 8 kinds of behavioral attributes into the model which is concerned about the number of crime cases. It is much better to show the effect of various factors on the crime rate and has strong reliability to determine the key attribute. This model improves the efficiency of handling cases. In order to get a better model, the next step of the study is to accelerate convergences' speed of the algorithm by use of rough set.

6. References

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