The Credit Profile Analysis of Subprime Consumer in China

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Abstract: In China, the online loan platform (which is also called internet finance platform) is booming in recent years. Most of its customers are subprime consumes, who are refused to obtain normal loan from the licensed bank or consumer finance company.

Usually, those consumers have to pay more interest ratio to the finance platforms like peer to peer (P2P) lending. The population of these subprime consumers in China is estimated more than 0.1 billion.

While the default ratio of these consumers is quite high, an appropriate credit risk model is required. However, no deep analysis of the subprime consumer's credit profile is made yet, generally the FICO model is simply revised to fit in with the subprime scenarios.

In this article, we will investigate the credit profiling as well as the credit scoring models of these consumers, in order to provide a professional reference to the credit risk managers and analysts in these online loan platforms, which is around over 10,000.

We are collaborating with a medium online loan platform from a commercial Chinese bank and obtain the credit data of more than 400,000 subprime consumers.

The consumer’s credit profile is built based two types of consumer data: one is from the credit bureau; the other is collected by the platforms.

Some data mining algorithms are employed to analyze the credit profiles of these consumers, for example, deep learning is applied to select more meaningful credit features for scoring and anomaly detection is used to find the un-usual patterns of these consumers. During the analysis, the impact of the non-tradition factors on the credit scoring are evaluated: such as income, marriage, gender, region, transfer status and so on, which are often employed in the credit evaluation for these online platform directly. Furthermore, the comparison of credit profiles between subprime consumers and normal consumers are given.

Key Words：Subprime Loan, Data Mining, Credit Scoring, Credit Profile