

Visual Analytics on Credit Cards Defaults

Visual Analytics project, A.Y. 2017/2018

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ABSTRACT

The project was developed during the Visual Analytics course. It concerns the visualization of credit cards owners data in order to make the bank director knowing the customers that are supposed to not be able to pay the credit card bill in the next month.

All data are represented using simple and well-known views that immediately highlights similarities among customers and give to the user an overview on all customers.

1. INTRODUCTION

After the paper presentation done during the lectures, we decided to focus our attention on a dataset related to bank transactions. Most of the bank transactions datasets are not public available (or they contains few useful information to protect users' privacy), but we were able to find a dataset related to this field.

We were thinking about the need for a bank director to always know how customers with a credit card from his financial institution behave. Particularly, we pay attention to the last payments and to the corresponding bank account balances of those customers.

From these data and from some other personal information of the customer (for example age, marriage status, ...), it is

possible to identify the ones that probably will not be able to pay the credit card bill in the next month.

The prediction is done by a machine learning algorithm, but the result is useless if it is not combined with an efficient visualization of the whole data. In fact, with this visualization a bank director is able to better understand the result of the machine learning algorithm, considering also the similarity between the result and some preexisting patterns or clusters.

2. DATASET

The dataset used in this project is taken from UCI database [1]

3. REFERENCES

- [1] I.-C. Yeh. UCI machine learning repository, 2016.