

LHV Financial Planner

Summary

LHV is researching options to develop a fully automated personal finance tool, which:

- Provides an overview of a customer's spending and helps forecast future spending
- Acts as a personal finance advisor who makes personalised suggestions to help customers increase their savings

The goal for ESGI is to suggest a **theoretical framework for the second part** of this project: building the personal finance advisor. Ideally, this would also result in a practical prototype.

Data

The data will include consist of:

- pseudonymised customer transactions, which are previously enriched with descriptive tags (ie. „restaurant“, „supermarket“, „loan payment“ etc) which categorise the nature of the transaction. Essentially, the transactional dataset is simply: identifiers, timestamps, amounts, tags.
- pseudonymised customer profile, which provides additional demographical and geographical information and data regarding the usage of bank products

The data only concerns private persons. If deemed necessary, the dataset can be expanded to include further data, as long as it is sufficiently anonymised.

Task

The help of the ESGI group is required to suggest and design a framework for developing a „smart AI“-type advisor that suggests changes in financial behaviour, based on each individual customer's profile and spending history.

While the simplest option is to develop rule-based common sense suggestions, we are really looking for solutions that involve data mining customers' behaviour and identifying patterns which work well in reality, as well as identifying the efficiency level at which they work.

An example of what the development process might look like:

Segment the clients into similar groups based on financial situation, demographic situation and/or personal preferences. View the financial behaviour of customers over a sufficiently long period and identify good/bad behaviour patterns, based on which recommendations can be designed. During implementation, recommendations trigger when a particular pattern is identified.

The group is welcome to suggest any design features or further improvements, and need not assume any technical requirements regarding implementation.

The objective of the personal finance tool is to increase the amount of savings for each individual customer. The desired framework is one which maximally achieves this goal.