

Client: Venture Capitalists in HealthTech

For Venture Capitalist Funds that want to invest in Health-Tech, there are a lot of uncertainties. Given all the diversity in the sector, the Venture Capitalists are having a hard time deciding what parts of the sector are worth investing in and what parts are riskier. That is why an automated version of analyzing business and investment opportunities in Health-Tech seems expedient. HealthTechBase (referred to as HTB) consist of a group of Health-Tech and Digital Health enthusiasts. This group has been interviewing several Venture Capitalists to get new insights into the sector and based on these interviews, have built a dataset. The dataset contains information about different companies in the sector. Now, they want to answer the question of the VC Funds by presenting a clear visualization of different investment possibilities. This project's goal is to realize this visualization. Note that the is not the Venture Capitalists but the team building this dataset for the Venture Capitalists.

In short, the goal of this project is to visualize the key performance indicators in the health sector to help venture capitalists determine their investment strategy.

Given the Health-Tech sector, there is a lot of diversity in the different companies. Some companies specialize in oncology, others in DNA or telemedicine, and so on. Each specialization has its specific data and functionalities. The HTB team suggests a classification of these different companies to enable determining the performance on class-level.

Relevant data for the investors could be the percentage of bankruptcy in a certain class or the growth rate of the sector. This should be discussed with the HTB team.

At this point, there is already a dataset available where 9000+ companies are stated, each with specific information about them. Not all companies are in the Health-Tech sector, but all companies are in the more general Health sector.

Roadmap

Together with the client, the following roadmap was determined:

1. When a company is added to the dataset, a description is given about what the company does and in which part of the sector it specializes. This is often a vague description and should be optimized. The proposed solution is using data scraping to get this information directly from the website of the company. However, it is possible to suggest other solutions. What is important is more qualitative data about the companies in the dataset.
2. After having done the data scraping, more qualitative information should be available about the companies. Classify the different companies, e.g. on specialization level, with this information.
3. After having made the classification, a visualization of the KPI's should be made for the investors. This should be simple and insightful.
4. **Extra:** The dataset was built with the help of Venture Capitalists and their information about specific businesses. Interviewing these people takes a lot of time. Is there a possibility to find more companies more efficiently?

Client: Live Light

Live Light is a subsidiary of Ethnicraft, a manufacturer of wooden furniture. Live Light rents out furniture instead of selling furniture. Their problem is that they do not know whom to target with their services.

The goal of this project is a data strategy for Live Light. In concrete, this means the investigation of what customer data should be kept and how this could be used to make predictions about interest, churn... Furthermore, this data could also be interesting to target specific profiles for their marketing campaigns.

Live Light is convinced that building a data strategy now could really benefit them in the future and thus gives us their full support. That is why they gave Emergent carte blanche.

Main Case: Establish a data strategy, a data-driven marketing strategy, and set-up a starting point for predictive models.

Live Light rents B2C and B2B. Since they are a start-up, they have not been able to collect much data. For now, 55 customers are using or have used their services.

Some B2C examples are people that do not want to buy furniture anymore, people that live in their house for a short period, people that do not have sufficient savings to pay for the furniture outright... B2B examples are start-ups, pop-ups, stagers...

There are already players in Europe and America doing this kind of service. One possibility is to investigate the competition and see what data they are using (note that these could be very different markets and blindly following that will not be the way to go).

Roadmap

The following steps were determined

1. Make a roadmap about what decisions should be made in the future, in particular, tactical and strategic decisions that can be supported with data and predictions:
 - a. Advise the company what data should be gathered about their customers.
2. Develop a data-driven strategy for Live Light based on public datasets or information about like-minded businesses.
3. Develop a model (could be a prototype) which indicates how predictions about interest/churn or the determined decisions could be made.

Client: Grant Theft Minecart

Grant Theft Minecart (referred to as GTM) is a network on Minecraft consisting of 4 servers. GTM is owned by the vice-president of Emergent, Liam Vereecken. Players can buy things to use in-game via a webstore. The network is linked to a website ([Grand Theft Minecart \(grandtheftmc.net\)](http://Grand Theft Minecart (grandtheftmc.net))) where players can e.g. interact with each other. Liam would like to improve the experience of the players by analyzing his data. Therefore, the goal of this project is to build a dashboard to get a visual representation of certain features like sales, churn, conversion, and ROI.

IMPORTANT: Some data analysis has already been done in R-studio. That's why this project will keep on using R-studio since the client has to be able to work on the dashboard as well.

Main Case: Build a dynamic dashboard containing certain features like sales, conversion, ROI, and churn and build a data infrastructure.

GTM already exists since 2014 but not all data had been gathered since then. Some data has only been gathered for a few years or even just a few months. While working on the project, students should be critical while looking at the data since data quality issues could appear.

The dashboard should be made in Shiny since this is the most used when working with R-studio. Next to that, the dashboard should only refresh once every day. There is thus no need to be in real-time.

It has to be made sure the dashboard does not query too much since this could harm the server.

The data is stored in MySQL. Viewer-access will be granted.

Players can also vote on their favorite network. The client wants to know which players vote for its network, how often they vote, and what stimulates them to vote. This is not a necessary feature for this project, but is a 'could have'.

Players also have money, which influences the economy of the network/server. This data is not yet stored but could be by querying the amount of money in the server at a certain time once a day. This data should then be stored to make it possible to work with this in the future.

Roadmap

The following steps were determined:

1. Understand the Data structure of the company.
2. Query the data from the database using R-studio.
3. Build a visualization of the data considering:
 - a. Sales
 - b. Churn
 - c. Conversion
 - d. ROI
4. Recommend the client on new data that could be gathered and could be interesting for the future.
5. **Extra:** Analysis of the voting of players.