

Belarusian State University
Minsk

V-Score business plan
INNOCENS global competition

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1. Executive summary

V-score is a software tool for automatic scoring (evaluation of a client's credit rating). More specifically, V-score is a complex solution for scoring based on modern technologies such as machine learning and parallel computing. The use of these technologies makes our product much faster than the majority of modern analogs since such technologies provide significantly faster calculations. In addition, the V-score product is relatively cheap.

In Russia and Eastern Europe there are not enough such tools and they have limited functionality only, so we expect that our start-up will be a success in the first years of sales.

Today our team has compiled a list of all the necessary functionalities and requirements for our software, as well as created a base of mathematical models for the "intelligent" algorithm and developed a prototype user interface. Now we are looking for the necessary investments.

The main difference between our product and similar ones is that our algorithm selects the most adequate scoring model considering all the factors. It is possible thanks to cloud services and parallel computing. Therefore, our software performs quick and fully automatic scoring analysis.

Our client is any financial organization that needs to conduct a scoring analysis. However, we believe that our product will be used by banks to optimize the process of issuing retail loans.

Our team is ready to provide the solution to the market in a year, after receiving necessary investments, which are described in section 7.

2. Our business and product

2.1. History of our business

Story of our startup starts in 2018, when we were studying at Mechanics and Mathematics Faculty. That time we began to think about any applications of our knowledge in numerical and statistical methods. Quickly we have found out that these methods are widely used in big data processing and particularly in scoring models building.

The idea of creating a business project in the field of financial scoring was also born in 2018.

Nowadays we have already formed the entire list of necessary functional capabilities and requirements for our scoring software so now we are at the initial stage of the software development. Also we have collected a database of mathematical models for “smart” algorithm and developed a prototype of the user interface. The next step for us is to find necessary investments for the further implementation of the project.

2.2 Product description

Our product allows to do scoring analysis automatically using intelligent algorithms and cloud services. Fully automated scoring minimizes the price of a scoring model and significantly speeds up the calculations.

Today scoring is almost a manual and long-time process. Usually scoring models are built as follows:

1. Client’s data is collected.
2. Analysts try to build an optimal scoring model using various mathematical algorithms.

However, there is a problem. Analysts have to work with large amount of data, so it takes a lot of time to build a model and makes the resulting model extremely expensive, because analyst's labor costs much.

In addition it is not always clear which set of parameters (predictors) will give the most accurate result and which mathematical model will help to build an adequate scoring model.

Our team proposes to make the process of building a scoring model fully automatic.

Our solution is based on three key principles:

1. Data is stored and processed on a cloud service.
2. Analysis is made by intelligent algorithms.
3. Parallel computing is used to speed up the calculations.

At the first step, we collect data from the customer and upload it to a cloud storage. Afterwards our intelligent algorithm starts working on several separate servers. There is an algorithm for selecting variables (predictors) and evaluating the resulting model on each server. The algorithm evaluates the quality of a model when the model is ready. At the last stage the system compares all the resulting models and automatically selects the best one.

3. Our market and competition

It is known that credit scoring is the process of evaluating a client's credit rating, therefore financial institutions such as banks and investment funds are the most interested in our product. Similarly, scoring algorithms can be used to assess the possibility of an insured event by insurance companies. Moreover, our product may be used by rental companies in process of installment sales. However, financial organizations are our priority customers.

The products that are currently used for scoring analysis make it expensive and time-consuming, while our scoring models are selected using machine

learning, which makes the calculation process much faster. Our technology will minimize the time and financial costs of the scoring model building process. In addition, our product uses parallel computing technology, which can significantly increase the speed of the calculations and do not force the customer to have large computing resources.

4. Our marketing and sales strategy

One of the significant advantages of our product is low price. There are some companies that provide similar services but their prices are much higher than ours.

The estimated price of our product is €700 for an annual subscription and €2000 for a lifetime license without updates.

We plan to promote our product via online advertising. The customer will receive the license key directly through our website, which is now in process of development. We believe that there is no need of a broad advertising because our product is designed for a limited circle of customers. Therefore, we can arrange a promotion directly.

5. Management and personnel structure

We do not need too many staff members to implement our idea. But we expect to hire a sales manager, who will present our product to the customers and a technical support manager who will maintain and consult the costumers. So in total four people will work in our company at the initial stage.

6. Business operations

Our start-up highly depends on funding and bears obligations to investors, because without investment, there is no way to develop the software.

We believe that the Republic of Belarus is a good place to start this kind of business, since there is no such product in Belarus at all. Labor in Belarus is cheaper than in the countries of the European Union.

We plan to become a resident of the High-Tech Park (HTP) in Minsk to receive preferential taxation. It means that we will not pay the added value tax (normal added value tax in Belarus is 20%). Also residents of HTP have preferential income tax of 12%, when normal income tax for all legal entities in Belarus is 18%.

To start the enterprise, we need to purchase 2 workstations with the following specs: Intel core i7 processor, 128 GB of RAM, 4 TB hard drive, and NVIDIA GeForce graphics card (€4,000 for 2 workstations). It is also necessary to purchase some software: Windows 10, MS Office and Terada SQL Assistant (€1800 in total).

7. Financial forecast for next three years

To implement our project we need an investment of €30800 euros. This money will cover hardware and software purchases (€5800) and employees salary (€25000).

As mentioned earlier, the estimated prices of our product are €700 for an annual license and €2000 for a lifetime license without updates. We plan to start our business in Belarus. The expected number of customers with an annual license is 25 during the first year and 100 during the second year. Also we plan to sell 5 lifetime licenses during the first year and up to 20 during the second year. Thus, the estimated profit for the first year is €27500, for the second year €110000.

If our actual profit is not less than 80% of the expected, we plan to enter the market of the European Union on the third year of our business.

8. SWOT Analysis

The strongest side of our product is quality. We offer quick and accurate results, because they are based on a sample of a large number of mathematical models. In addition, a license for our product is relatively inexpensive.

The main weaknesses of our start-up are strong dependence on financing and limited target market segment. If we cannot get the expected funding, we will have to work without some of the employees. That will slow down the development process.

Today the retail loan market in EU exceeds \$ 900 000 000. That is a great opportunity for our product. We expect that the market will grow further in future, so the demand for our product will grow proportionally

The biggest threat for our business is that our company may not become a resident of a high-tech park, as a result we will not get preferential taxation.

Appendix I

References

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