

Leader's Log | Kirill's Log: Utilizing Data Science in Home Credit Indonesia



# Utilizing in Home



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This Article to:

## **Data Science is all the buzz lately. Check out what it is and how we utilize it!**

Have you ever wondered why most of the ads that pop up on your social media are relevant to you? Or, do you notice that the majority of the movies your favorite streaming service suggests you to watch are right up your alley?

When you surf the world wide web, you simultaneously share data such as your location, your age—possibly, your browsing history, and many others. Companies that place advertisements would collect these data, cross-reference them with each other, and then provide a conclusion on a set of ads that fit your interests the best.

What makes it cool is that all these decisions are made automatically by a computer which executes a model predefined beforehand. How does this happen you may wonder, this is where Data science comes in. But what exactly is Data Science? Let **Kirill Odintsov** (Head of Data Science) share his knowledge here. Read **Kirill's Log** on Data Science below!

"Data science is not about knowing methods or algorithms. It's about forming a hypothesis, finding data to test these hypotheses, and reach a good enough understanding of your problem to make actionable and impactful steps. Data science is not new. In the earlier days, data scientists were simply called *statisticians* or analysts. They usually use those older computers to build models that many of them still use until today. The only difference is that while it may have taken a while to compute models some 20 years ago, the data scientists now find it easier with the release of the newest super-sophisticated computers today.

Analysts and businessmen should be like pilots in a cockpit. Setting the goals and destination is their responsibility. Then they need to observe the machine's decisions and intervene when the machine is making the wrong one. When the situation arises, they are the ones to deal with the more innovative and creative tasks.

In Home Credit, we utilize data science to help the company achieve its various targets. As a financing company, we deal with a lot of money transactions. This makes it imperative for us to understand the patterns of money transfers in order to prevent unnecessary losses. Thus, one of the uses we have for data science is to detect transactional frauds, where a customer seems to make a transaction when in reality, he does not.

Anti-fraud activity is basically a process that tries to prevent fraudsters to steal money from our customers. Machine learning is trying to establish patterns of 'strange transactions' and remember them in order to be able to identify similar patterns any time in the future and notify us automatically.

Our customer relations management system (CRM) also uses support from data science. As it is a system designed to assist customers, our CRM engine provides relevant information to customers based on various pre-defined indicators, such as age, gender, or location.

From there, we can understand our customers' needs and offer them the best and relevant solution. Data science goes far beyond the simple placement of product advertising. The data provides a thorough understanding of our customers' behavior, such as when is the best time to call them with an offer or which social media platform is best to leave him a message with the best relevant solution.

Another use of data science in Home Credit is for customer segmentation. By segmenting our customers using data science (specifically Machine Learning), we are able to predict the future behavior of customers' appetite to take loans and future bad payment behavior of the customer. To further utilize predictive analytics and customer segmentation, we are currently building Machine Learning models to predict the probability of a customer to use our services.

The main user of data scientists at Home Credit is the Risk Management team when they assess loan applicants, i.e. their background and ability to repay credit.

Our Data Science team operates inter-function. This helps us utilize knowledge from one function to another and make decisions based on the data gathered from different areas. We are also placed directly under our CEO and this gives us the opportunity to innovate even under very rigid processes. To ensure constant delivery, MVO, and transparency to our users, we apply the Agile/Kanban Methodology as our way of working. We also make sure to use data and insights from every source available, this for sure includes our international community. By doing so, we have the opportunity to learn from others and not always have to reinvent the wheel.

As companies like us use data science models as a key analytical tool for almost all kinds of decisions, data scientists are in high demand. So, does this #AI-powered modeling and data processing, interest you?

If it does, I suggest you at least do two things to begin with. First, refresh your statistics lessons. If you do not work in this field, chances are your statistics might be a bit rusty or gone altogether. You need to re-sharpen them.

My second suggestion would be to learn *Python* or *R programming* languages. These are two of the basic languages important to start your journey in the world of data science. These are my quick suggestions if you're interested to become a data scientist. Master these two, then there is a chance for you to help companies maximize their business potentials."

Data Science is more exciting than we thought! Any questions? Feel free to reach out to Kirill Odintsov [here!](#)

**Kirill Odintsov**  
Head of Data Science  
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