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UNDERSTAND DATA MINING

Understand
Data Mining

IntroBooks

Contents

Book Description

Data mining is definitely not a piece of cake. There are those who spend years in the specialization of this particular field in order to operate businesses smoothly. Are you looking for a data mining course? You too, have the ability and the means to learn all the tricks that go into data mining.

This book has been specifically written for those looking for a thorough introduction of data mining from the basic definition of the little details that add up to data mining of businesses of large magnitude. If you feel there is room for better quality assurance and smooth data mining of your business then this is the best possible book for you.

The book covers the basics of data mining in a rather comprehensive manner. Don't worry about the technicality and difficulty level of the terminology as the explanation has been simplified to such an extent that anyone and everyone can benefit from it.

Here's a preview of what you should expect to learn from this book:

- What is Data Mining?
- Types of Digitalized Data and Information
- Categorization of Data Mining Systems
- Issues with Data Mining
- Data mining tips that help you stand out as an effective business manager

Continue reading for absolute motivation and superior data mining skills to operate your business *flawlessly.*

Introduction

Data mining is as simple as the term sounds. However; in order for you to truly understand the need for data mining; you should ponder upon the following:

- Do you think the business requires additional improvements?
- Are you not entirely satisfied with the way things are currently being operated?
- Do you feel the need to hire a professional for operational excellence?
- Are you currently struggling whilst dealing with different work projects and tasks?

If your answer to the above is yes then this book is definitely created for you. Prepare yourself for a complete transformation of mindset and work ethic. By the end of this read, you will be able to define your business activities in the best possible manner and tackle current and future projects flawlessly.

In the following chapters of this book, you will embark on a journey towards a more successful and productive business by acquiring the basic principles of data mining.

You are about to uncover intricate yet critical details that are generally ignored but hold the utmost importance in the current corporate world.

Once you have been enlightened with the well-researched knowledge in this book, you will finally be ready to take charge of your business and optimize the results of every single one of your projects.

The comprehensive learning of this book will enable to you to start from the very scratch as well. If you lack the slightest of clues to business operation and data mining then you have chosen the perfect guide for yourself. Everything that you should know about data mining will be covered in detail starting from the very basic to the major concepts that you should be very well aware of in order to operate a business successfully.

Though the book is most beneficial to those directly in charge of data mining but those of you not in direct control of the business can seek guidance from the book. The knowledge that you will acquire from the book can not only be passed on to your supervisors rather you will have complete command over each and every little detail of your personal work tasks. Not to forget the extra credit you are bound to receive for appropriate guidance and taking the business seriously. It's really a win-win scenario for you.

You no longer have to delay your tasks or try data mining with no professional knowledge. It's high time you reach your true potential and help the business in reaching its true goals and objectives. A much better professional and personal life await you.

The only step left for you to take is; reading the very first chapter of this golden book.

CHAPTER 1: WHAT IS DATA MINING?

Before jumping into the good stuff; the tricks and the must-dos, it's highly important for you to learn the basic knowledge regarding data mining in general. Generally, people are either carrying misconceptions regarding data mining or are completely unaware of the different dealings that go into it. It's best that you have an overview or a summary of some sort in order for you to have a strong foundation of your business concepts.

While every business is different, the basics are the same no matter what. That is another thing that makes this chapter so important for just about everyone.

KNOW YOUR OBJECTIVES

Why does the business exist in the first place?

The reason is, usually, to achieve a set of specified goals or objectives. Sometimes, these objectives are carefully considered, written down, debated on, and then a business is created in order to achieve the goals that have been decided to be adequate.

In some cases, the objectives remain hazy and buried at the back of one's mind, causing them to blindly proceed with a business with no caution whatsoever.

As you may have deduced, the latter method is not a good one. It is impossible to properly manage a business when you do not even know the direction in which it is supposed to go!

It is owing to the aforementioned consequences that the basics of data mining require objectives which are true to the business concept and are clearly defined. You along with every employee of the business should have complete knowledge of your vision and the short-term goals; the objectives of the business.

Throughout the course of different business projects, if you are having issues with managing it, referring back to these predefined goals may help you to stabilize any issues and figure out how to improve.

So, take a while to just think and decide what it is that you wish to achieve from the business. What is the main purpose of its existence? Are you looking to create a difference? Are you bringing innovation and simplifies solution to the market or are you simply looking to earn a profit? Whatever it is, you must be clear about it. After having clearly deducted the purpose of your business and its short term goals, write all of your objectives down, and then narrow those objectives down by removing any that are unrealistic or don't seem to truly represent the business in the best possible manner.

You can absolutely rely on your gut feeling and prior knowledge while judging these. Don't forget to keep the vision in consideration at all times. You should never lose sight of your long-term goal at the expense of short-term profits.

Once you have done this, managing the business will become a much less complicated task.

If your business is one that involves a group of people or owners, make sure to consult with all of them before deciding on the objectives. Businesses of such require participation from everyone in order to be successful—it can't be a one-sided thing. It really doesn't matter whether you're the brainchild behind the business concept. If someone has a share in the business then they have the right to decide its goals and objectives. This helps in avoiding future conflicts as well.

UNDERSTANDING BUSINESS LIMITATIONS

After having clearly defined the business objectives; it is highly important for you to look for possible loopholes and different limitations that your business faces. The limitations can be in terms of anything from your financial capital to the market share or human resource etc. The second most important principle is for you to come to terms with the limitations before beginning the business operations.

This logic can easily be applied to businesses that are currently being operated and lack good data mining. You are simply required to have a look at each and every process that does not match with your objectives or lacks superior skills on your part. You need to find out your limitations in all the processes in order for you to manage them effectively.

This way, you will not have to suddenly receive a shock while the business is going on, which would cause you to have to scramble to find a solution in limited time.

You might be wondering what is really meant by the word 'limitations'. In simple words, the limitations of a business or one of its processes could be anything that requires them to be completed within certain boundaries.

For example, your company's funds could create a limitation such as 'This project must be completed by using less than X amount of money.' Another very obvious limitation is, of course, time. If your project needs to be completed by, suppose, next month, then that is a limitation to keep in mind as well.

Other limitations could be your resources, the number of your employees, etc. Make a list of all of these constraints and manage your business, right from the start, in a manner that allows it to fit within these constraints.

If you feel that the business is being operated in such a manner that the limitations are being exceeded then you should know that there is a need for immediate reaction. There must be certain steps taken immediately in order to get things back into the right place without compromising on time or quality.

Business managers that do not keep these constraints in mind at all times usually end up costing quite a sum to their enterprise, leading to a lowered position in the eyes of the higher-ups. If you're looking to be known as the one person to count on then this is a mistake that you should avoid at all times.

SCHEDULE WORK PROCESSES

The best way to tack different work processes and business related activities, it is highly important for you to work out proper schedules in order to keep things going in a continuous motion. Not only will you be able to keep things sorted but you will have the opportunity to monitor different aspects of each work-related activity as well.

The third basic principle of data mining is to create a thorough and precise schedule for every short term goal and process being operated. This is truly one of the most important principles, and can improve your performance on the project by miles.

One of the purposes of schedules is to dictate when each and every step of the process and activity needs to begin, and when it needs to end. In addition to this, they help to pinpoint to the part played by every employee involved and let them know exactly what they need to do. This, in turn, simplifies the job of a business manager in terms of monitoring the workload and making sure the business goals are being met in a timely fashion.

This can help them to focus on the task required of them instead of unnecessarily switching from one task to the other and back again. Your job, as the manager, is to keep a close eye on the employees and the schedule you have created so that you can check whether it is being followed thoroughly by everyone. If it is not, then it may be a good idea to discuss things with those that are deviating from their schedule. If these individuals still fail to correct their ways after this, you will probably be better off removing them from the particular business task altogether.

With that, we have gone over the three basic principles of data mining that need to be strictly adhered to before we get into the details. You need to know that if these basics are not followed properly, everything will just topple over and be ruined.

Think of it as if you are building a strong and sturdy foundation to place a building on top of. If the foundation is lumpy and carelessly made, the building will not be as stable as it might have been with a better base. The foundation, however, does not take up a lot of room—which is why this chapter was kept short to allow more space for the rest of the building.

Moving on to the next chapter, which will cover further details of data mining that are highly critical for you to know.

CHAPTER 2: TYPES OF DIGITALIZED DATA AND INFORMATION

Every business comprises of different activities and core processes that are truly crucial to its existence. There are certain areas that carry more importance compared to the rest. You must focus on data mining of these areas first in order to get the prioritization of your business right and for you to manage the business in the most effective and efficient manner.

In this chapter, you are going to have a brief overview of each of those aspects one by one so that you can use them to your benefit. The first and foremost aspect for you to cover is integration data mining.

INTEGRATION DATA MINING

In order for you to understand the importance of integration data mining, it is important that you have a complete understanding of its definition. It is, in short, the data mining knowledge area that includes processes that are required to make sure that all the components of the business are organized and coordinated properly.

There are a few factors responsible for ensuring satisfying integration data mining.

The first factor is to learn from your mistakes that you made with previous methods and techniques of data mining. Previously failed process and activities are included in this as well. It is a good idea to make a list of all of the things you did right and wrong previously, and then use this list to figure out what changes and improvements your current process and operations require in order being successful. After having defined the required changes, the next obvious step is for you to implement them effectively. The sooner the better.

The next key point is to make sure that you are open to changes. Acting stubborn and attempting to stick to your initial plan—even when it is not working out at all—is a foolish thing to do, and is a quality that no manager should have.

If, at any point, your initial plan fails and your business is falling apart, don't be afraid to make some changes. On an individual project, you will either have to come up with some well thought out adjustments on your own or ask someone else for some advice.

This is another thing that you should not be afraid to do—ask for advice when you need it. You can ask a coworker, a higher up or anyone that you think has sufficient knowledge about the type of task you are dealing with.

For a group project, it is best to hold some sort of a meeting that includes every single participant of the project. Ask everyone for their advice and do not try and downgrade anyone's ideas, even if they are not up to par, otherwise, even those that *do* have valuable ideas will be too afraid to speak up.

The next main point when it comes to integration data mining is to get 'buy-in'. A buy-in is when an entity purchases shares from your company.

For successful integration data mining, you need to try and get buy-in from key shareholders and team members in order to receive adequate support and funds. To do this, you will need to create a project charter, which initiates the project and includes all of the required approvals, sanctions, etc. It also summarizes the goals of the project, as well as the members and their responsibilities.

You will also need a preliminary scope statement, which is a high-level definition of project scope and includes the reasons for taking the initiative, highlights goals and limitations (and their solutions) of the project as well as the major shareholders. These resources will help you to get buy-ins.

Scope data mining

The next aspect of data mining is scope data mining, which is all about making sure that the business process only includes work that is absolutely necessary for successfully completing the short-term goals and achieving its objectives.

To do this properly, you need to be aware of what is included in the scope of the business and what isn't. Let's go over some key points to help you out with this aspect.

The very first step for you is to make sure you have all the requirements for fulfillment of your short term goals and different current projects. Each of your business projects needs to have a strict list of objectives along with the different limitations being faced.

Keeping these in mind, you need to know what stakeholder require from your business if you have any and then make sure that you have everything necessary to fulfill those requirements. Every effective data mining revolves around maximization of shareholder's wealth. You should never undermine the importance of your shareholders regardless of the manner in which the business is divided. A manager's primary task is direct to benefit the shareholder through financial profits.

The second key is to define the scope. The scope includes a set of deliverables, a budget and an expected closure time—it's rather similar to defining the limitations, so if you've already done that thoroughly then you should be on the right track. Any amount of variation in the scope can hugely affect the budget, the schedule and the success of the project, so make sure you manage this aspect very carefully.

When you have a clearly defined scope, data mining becomes so much simpler. If there is ever a change you wish to make, all you need to do is ask yourself whether this change can fit within the range of the scope. If so, you can go ahead with it, otherwise, you cannot.

The third thing to do is to create a work breakdown structure, which is a graphical representation of the ladder that the business must follow. In short, it should include the main, final objective of the business, and then divide this goal into a number of smaller phases which contain multiple manageable steps.

This graphical representation will aid you in managing the business because you will have a visual chart to refer to when you wish to know about the steps that any 'phase' requires. Scientific research has consistently proven the benefits of visual aids in understanding problems and realizing solutions of different business processes.

The next thing to do is to verify the scope and then get the opinions of others. Whom you need to get feedback from depends on the type of projects that you are working on currently, but it could be from your boss, from customers, etc. This will help you to improve the quality of the project and make sure that the work you are doing meets the needs of the scope.

The final factor to keep in mind is to properly control the scope, and prevent people from wildly altering or attempting to increase it. To do this, you will need to have a well

thought out system for processing and reviewing requests regarding changes.

If you do accept changes, your schedule and budget must be adjusted to accommodate it, and you should receive a formal sign-off from an important shareholder before you go ahead with it. Scope control is necessary to avoid exceeding the budget and getting the project completed late.

Time data mining

Time data mining is something you must have been advised about on countless occasions. Those who realize the importance of effective time data mining surely make it in the corporate world. The fast-paced the world demands nothing less than perfection from you and in order for you to provide that, you must make sure to manage time effectively.

Unfortunately, it is a form of data mining that many people either overlook or are not well informed about. This segment is going to sum up the basic tips to save and effectively use your time while managing the business operations.

The first thing you will need to do is to learn how to delegate. Many people try to take on everything themselves. This may be done out of a desire to know every detail about the project, or a desire to operate rather than manage. However, delegation is something that can allow you to have more time to focus on what is actually important, and can allow employees to develop their skills as they work on tasks on their own.

Things that should be delegated include routine tasks, fact-finding assignments, preparations of rough drafts, and a few tasks that will challenge the employee. Set clear, realistic goals for the task that is being delegated and communicate the task in a clear manner.

The next thing for you to do is to ensure eradication of all possible interruptions in your business processes. This means you will need to create a routine when it comes to checking emails—no more retiring to the computer after every five minutes—as well as answering the phone. Learn to distinguish between calls that are urgent and calls that are not important. Set a time to return calls in batches, if you are someone that receives a lot of calls throughout the day.

Thirdly, don't be afraid to say no to visitors. If someone does not have an appointment yet wishes to speak to you, you may need to think about refusing politely unless it is truly urgent. If you agreed to speak to every single visitor, then you would be wasting a lot of time that could have been spent working on the business operations. Learn to strike a balance and don't go with either one of the extremes. People should be comfortable in communicating with the manager. This goes for both the shareholders and the employees.

COST DATA MINING

Cost data mining actually requires you to be rather careful. The costs of your business are directly associated with time and integration data mining as well. You need to keep in mind the cost scope and limitations of the business. The financial capital at hand is actually a huge determinant in the decision-making of pretty much all of the critical business decisions. It is high time you learn about cost data mining in depth.

When it comes to money managing, things get pretty tough. It is usually much easier to make more time than it is to make more money. Let's talk about how you can manage your costs when you are already well into the project, and your costs are exceeding what you planned.

Let's suppose that your costs have exceeded by around ten percent.

The first thing to do is to start watching the budget very carefully—something you should have done from the start, really—and make sure that it doesn't increase any further.

Now, when it comes to taking action, you need to look for potential change orders. This can be tricky because many clients/customers do not like change orders. If you see the opportunity, though, you might just be able to price it in a manner that allows the profit margin on that work to be a tiny bit higher, increasing your revenue. This can aid you in bringing the budget back on track.

The second thing to do is to rid yourself of unnecessary resources, such as people you may have hired. If they have very few or no tasks let to do in regards to the business goals then it is best to get rid of them. As harsh as that may sound, it is necessary to ensure that the amount they are charging for their services does not take a toll on your budget.

Those are the main things to do when your budget is going above what you were hoping for. In order to decrease the stress of cost data mining when the project is ongoing and the budget is going higher than expected, you absolutely need to create an efficient and shrewd plan before even beginning the different business processes.

You need to keep all the required resources in mind while mapping out the business's course and create a budget accordingly—one that is agreed upon by you, your coworkers/employees, and shareholders.

Quality data mining

The next aspect for you to focus on as a manager is a quality data mining. This has rather become a tradition of the modern corporate world. People want to be sure of what they're investing in. Quality data mining certifications have helped businesses mark their name in the corporate sector. The success of achieving the business objectives and goals is quite dependent upon the quality of each and every little business activity

There are six main keys to keep in mind in order to manage the quality of your business properly.

The first one is, of course, to have a good plan right from the start. It really can't be stressed enough how important it is to have a good plan before you begin the business. If you plan poorly, you will need to put so much more effort into data mining, and will have to deal with so much more stress. The steps to be followed are Plan, Do, Check, Act.

The next tip is to communicate properly. Communication is something that is a must for business managers to maintain with other team members and shareholders. Business managers should always have excellent communication skills. If you don't, then spend some time researching and practicing until you improve. You need to learn how to encourage both formal and informal discussion about expectation, ideas, progress, etc.

The third key is to involve the shareholders. This includes anyone that can influence or be influenced by the outcomes of the business. So, pinpoint each and every shareholder, take note of any worries they might have as well as any information they need to know, and then come up with a means of providing them with this information.

The fourth key is to go through all of the key outcomes of the business and measure whether those outcomes are being achieved or not. This should be done at an individual level as well as a team level (if you are working in a team), and is best done regularly right from the time the business begins. This will allow you to identify and tackle any issues early on.

This tie in with the next tip: to tackle things early. All of your measurements will be useless if you don't make use of them and act early when it comes to facing issues. Procrastination is not an option!

The last tip is to review your progress regularly to keep the business on track and help improve employees. This is another step that will help identify problems early on.

Risk data mining

You cannot have a happy-go-lucky attitude with your business especially when you are responsible for the generation of profits for shareholders. Data mining of the possible risks that your business faces is rather critical. You have the option of either minimizing them right away or you can look for future opportunities to help reduce the general risk. It is always best to be safe than sorry.

There are certain rules to the process of risk data mining and you should keep them in mind while managing:

First of all, you need to really embed risk data mining into your business. Businesses that use no approach when it comes to risk data mining are rarely successful. You, as the business manager, should make risk data mining part of your day to day routine at work, as well as something that is discussed at meetings regularly.

The second rule is to pre-define and estimate any possible risks as soon as you start working on the business. This requires you to think openly and try to think about any future situations that might occur.

Talk to all of your team members about this, as they all have different levels of experience and may be able to provide some useful information, and you may even want to talk to some experts that are not taking part in your business, but have considerable knowledge about the required subject. No, you will not be able to identify every single risk, but you may be able to figure out the majority, and deal with them appropriately.

The third rule is to communicate about these risks. More often than not, when a business fails, there was someone or the other that saw the failure coming.

This is exactly why it is important to communicate about risks. Ask your employees or team members to report any possible risks to you immediately, and discuss the subject as often as possible.

Next, keep in mind that risks are not always bad—they can be good, as well. While it is extremely important to spend time focusing on minimizing the bad risks, it is also a good idea to spend a little time to consider the risks or opportunities that are worth taking, and that may have a positive outcome.

The next rule is to avoid treating all risks as if they are on the same level. You need to learn how to prioritize which risks are the most urgent ones to address and which ones are insignificant in comparison. Spend more time on the risks that can cause large losses or large gains. Once you have dealt with all of those, you can move on to the less significant ones if you still have time.

The next rule is to implement risk responses. You have a few options when it comes to risk responses to threatening risks. You can avoid, minimize or accept risks.

In order to avoid the risk, you will need to plan things in a manner that allows you to continue working on the business while taking a swerve that prevents you from having to face the risk.

When it comes to minimizing risks, you can try to reduce the effects of the risk rather than eliminating the risk itself, or you can try and prevent the risk by altering factors that may be causing it in the first place.

The last option is to accept the risk. This should only be done if the effects of the risk are not too significant, or if the risk is nearly impossible to eliminate.

For positive risks, of course, the options are not the same. For positive risks, you can choose to look for risks, maximize their benefits or just ignore them if they are not noteworthy.

That concludes this chapter on all of the major aspects of data mining that you will need to focus on when you wish for your business to be a booming success.

CHAPTER 3: CATEGORIZATION OF DATA MINING SYSTEMS

You can think of this chapter as a bonus in your new found journey of data mining. The information you are about to receive is important and light. You can skim through the tips and have a sound grip on the basics of data mining.

KEEP ORGANISATIONAL PERSPECTIVE

This basically requires you to stay focused on the primary perspective of the business. The long-term vision should be kept under consideration while making alterations and implementing new decisions.

It is quite commonly avoided by managers which basically set them apart from the really good ones out there. The different business processes and projects should be useful to the organization as a whole. You need to keep the bigger picture in mind at all times.

While planning the project or business process, ask yourself, "Will this improve the company? How?" Then repeat these questions throughout the course of the business operations whenever you are making any adjustments.

Suppose you wish to hire someone to help out with a particular aspect of the business. You have sufficient funds, so that is not the issue here. However, you still need to make sure that this person is worth the money and the effort you will need to put in to hire them. In this situation, it is necessary to think about whether or not this person's working on the project will make a significant improvement in terms of the position of your company.

By significant it is clearly indicated that overall importance is to be measured. You need absolute value for your money and small benefits are not be considered in this regard. Employees that offer multiple talents and different additional services should be preferred. Your resources should be able to make a difference for the organization in a positive manner.

ISSUES WITH DATA MINING

Commitment is something so simple that it is easily ignored. People forget to look for high levels of commitment to the employees and partners of the business. In order for you to manage the business smoothly, it is highly important for you to generate a good sense of commitment within your employees. Don't forget to stress upon yourself either. You need to be fully energized and focused in order for you to trigger higher levels of commitment from the employees.

You need to take hold of all the responsibilities. You must make sure that people are willing to actively participate in business related activities. Giving employees a certain degree of power when it comes to decision making helps generate their interest in the way things work.

You should include the employee in the business through various means such as promotional offers or bonus rewards. Share offers are amazing incentive for creating a sense of commitment on the employee's part.

CONCLUSION

Now with the conclusion of this book, you should pat yourself on the back as you have successfully acquired the basics of data mining. You have the right kind of tools needed for successful and effective data mining.

Now that you have learned all these new concepts, the most important step still remains undone. There is absolutely no point for you to learn all of these new techniques and prioritization if you don't really implement them. You must translate all of this important knowledge into your business processes.

You are required to take control of things and the future of your business. You can read as many books as you want but you will not be able to achieve your vision until or unless you start implementing. This book has taught you the basic definition of data mining.

You have the right kind of knowledge when it comes to prioritization and different techniques to be used for your data mining. From focusing on time to the assurance of quality, every little detail has been explained to you. You have been offered additional tips to help you out in achieving short term goals along with the long-term vision of the business.

The very first step for you to do now is to start evaluating. Start from yourself and think about what is missing from your current style of data mining. Implement the necessary changes in your style of data mining and then focus on the business.

Analyze the business in regards to its objectives at first. Keep the long term goal in consideration and implement the required changes in different types of data mining from time to generation of commitment in the employees. After a thorough analysis using visual aids and more, you will be able to identify areas of improvement after which the revolutionary changes can begin.

Go easy on yourself, though, leave room for intuition and look for ways to improve upon your current work. Don't forget to appreciate what you have achieved and make sure to recognize the efforts of your employees. Keep the communication clear and effective in order to generate the perfect response from the employees and the shareholders. Apply the basics of data mining and prepare yourself for instant success. Evaluate and compare the difference of data mining pre and post new implications. Compare the final outcomes and the cost related benefits. Good luck with your future endeavors!

ABOUT INTROBOOKS

IntroBooks delivers up to the minute information covering everything on a topic in only one hour of reading. This book is written to give essential information in a straight-to-the-point, easy to read format.