

A PROJECT REPORT



**DATA ANALYSIS OF ATLIQ TECHNOLOGIES PVT LTD  
WITH REFERENCE TO  
ATLIQ TECHNOLOGIES PVT LTD**

SUBMITTED  
BY  
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HT NO.: 1316-216-72-038

PROJECT REPORT SUBMITTED FOR THE PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARDING OF THE DEGREE  
OF  
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UNDER THE GUIDANCE OF  
PRECEPTOR

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PRESIDENCY SCHOOL OF MANAGEMENT AND COMPUTER SCIENCES  
(AFFILIATED TO OSMANIA UNIVERSITY - HYDERABAD)

(2021 - 2023)

## **DECLARATION**

I hereby declare, to the best of my knowledge and behalf, that this project report titled

**“DATA ANALYSIS OF AtliQ TECHNOLOGIES PVT LTD” at AtliQ PVT LTD.** Submitted by me to the **DEPARTMENT OF BUSINESS ADMINISTRATION, of PRESIDENCY SCHOOL OF MANAGEMENT AND COMPUTER SCIENCES** (affiliated to Osmania University-Hyderabad), is a bonafide work undertaken by me.

It is not submitted to any other university or institution for the award of any degree/diploma/certificate or published any time before.

**DATE:**

**PLACE: HYDERABAD**

**MOHAMMED ABDUL RAHMAN**

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## **ACKNOWLEDGEMENT**

It is my proud privilege to express my deep gratitude and indebtedness to all those who enabled me to complete my project titled "**“DATA ANALYSIS OF AtliQ TECHNOLOGIES PVT LTD”.**

I would like to express my sincere gratitude and thanks to "**PROFESSOR DR. SYED VALIULLAH BAKTHIYARI**", **PRINCIPAL** of **PRESIDENCY SCHOOL OF MANAGEMENT AND COMPUTER SCIENCES (Affiliated to Osmania University-Hyderabad)**, for his constant encouragement and invaluable suggestion throughout the course.

My sincere gratitude to **MRS SADIA NAJMUS SAHER, ASSOCIATE PROFESSOR OF INFORMATION TECHNOLOGY** for her valuable and constant interest regarding the progress of the project work throughout the period of study and who guided me equally in completing the project work.

I am extremely grateful to my family, friends and all my well-wishers, who have given me immense support in completing the project successfully.

**MOHAMMED ABDUL RAHMAN**

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# ABSTRACT

Data, undoubtedly, is what we get to see almost anywhere and everywhere. Needless to say, the data is enormous and it doesn't stop there, it is growing at a pace beyond imagination! With that being said, data analytics is gaining popularity with every passing day in order to harness this data. But what leaves us wondering is how this field of data analytics has taken shape? How has this evolved over the years?

The use of analytics by business can be found as far back as the 19th century, when Frederick Winslow Taylor initiated time management exercises. Another example is when Henry Ford measured the speed of assembly lines. In the late 1960s, analytics began receiving more attention as computers became decision-making support systems.

Business intelligence (BI) is software that ingests business data and presents it in user-friendly views such as reports, dashboards, charts and graphs. BI tools enable business users to access different types of data — historical and current, third-party and in-house, as well as semi-structured data and unstructured data like social media. Users can analyze this information to gain insights into how the business is performing.

There are many ways to approach sales analysis. Some businesses use software that automatically crunches the numbers and produces charts and graphs. Others prefer to do things manually, using Excel or another spreadsheet program.

We can identify the trends and sales patterns of the AtliQ Technologies to provide the business solutions to the Organization for the achievement of the pre-defined goals.

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# **CHAPTER-1**

## **INTRODUCTION**

# **INTRODUCTION:**

a simple definition of analytics is “the study of analysis.” A more useful, more modern description would suggest “data analytics” is an important tool for gaining business insights and providing tailored responses to customers. Data analytics, sometimes abbreviated to “analytics,” has become increasingly important for organizations of all sizes. The practice of data analytics has gradually evolved and broadened over time, providing many benefits.

## **STATISTICS AND COMPUTER**



Data analytics is based on statistics. It has been surmised statistics were used as far back as Ancient Egypt for building pyramids. Governments worldwide have used statistics based on censuses, for a variety of planning activities, including taxation. After the data has been collected, the goal of discovering useful information and

insights begins. For example, an analysis of population growth by county and city could determine the location of a new hospital.

The development of computers and the evolution of computing technology has dramatically enhanced the process of data analytics. In 1880, prior to computers, it took over seven years for the U.S. Census Bureau to process the collected information and complete a final report. In response, inventor Herman Hollerith produced the “tabulating machine,” which was used in the 1890 census. The tabulating machine could systematically process data recorded on punch cards. With this device, the 1890 census was finished in 18 months.

## **DATA MINING**

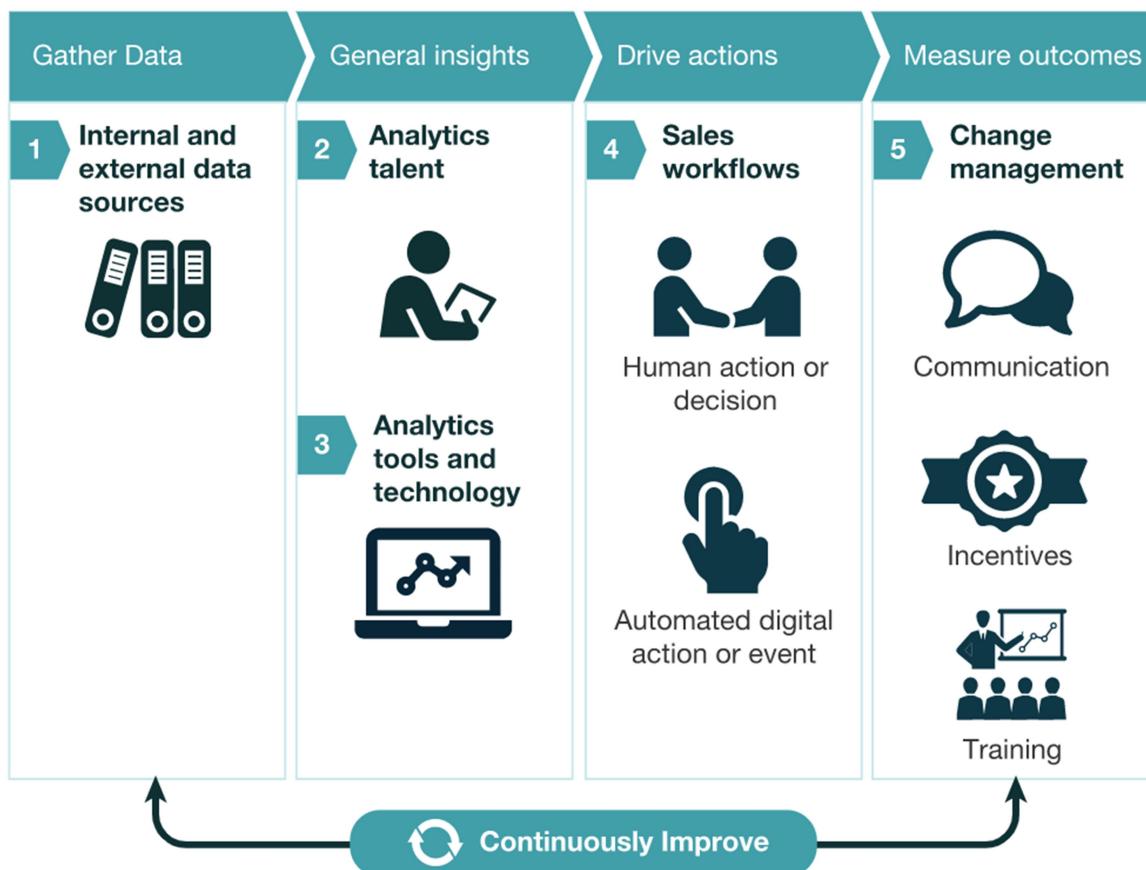


Data mining began in the 1990s and is the process of discovering patterns within large data sets. Analyzing data in non-traditional ways provided results that were both surprising and beneficial. The use of data mining came about directly from the evolution of database and data warehouse technologies. The new technologies

allow organizations to store more data, while still analyzing it quickly and efficiently. As a result, businesses started predicting the potential needs of customers, based on an analysis of their historical purchasing patterns.

However, data can be misinterpreted. Someone in the trades, having purchased two pairs of blue jeans online, probably won't want to buy jeans for another two or three years. Targeting this person with blue jean advertisements is both a waste of time and an irritant to the potential customer.

## **SALES ANALYTICS**



Sales analysis is reviewing your sales data to identify trends and patterns. Sales data can help you make better decisions about your product, pricing, promotions, inventory, customer needs other aspects of your business.

Sales analysis can be as simple as reviewing your sales figures regularly. But it can also involve more complex statistical methods. Either way, the goal is to gain insights that will help you boost sales and improve your bottom line.

There are many ways to approach sales analysis. Some businesses use software that automatically crunches the numbers and produces charts and graphs. Others prefer to do things manually, using Excel or another spreadsheet program.

The most important thing is to review your sales data regularly and look for opportunities to improve your business. With sales analysis, you can make informed decisions that will help you grow your business and achieve your sales goals.

**AtliQ** was established in 2017 as an IT services company with the aim to help businesses integrate their processes with automated tools. Over the past 5 years, AtliQ has successfully provided many businesses with custom solutions that help them scale, or streamline their processes, reduce overhead costs and increase overall efficiency.

As a multinational company located in the United States and India, we've catered to businesses from all corners of the world. Our insightful strategies and long-serving processes have helped us assist various industries with great results. Our resourcefulness has led to satisfied clients, successful collaborations and rapid growth.

Our goal is to continue serving companies with resourceful software solutions and aid their growth and digital transformation!

As a consequence of the introduction of various new businesses in the sector, the Indian retail industry is one of the most dynamic and fast-moving industries. Over the last one decade, India's retail industry has expanded dramatically. The pandemic was the most unexpected disruption to life and business in recent history, and developments in the retail sector's external environment have had a significant impact on the country.

According to the Retailer Association of India (RAI), sales in India fell by 79 per cent during the pandemic compared to pre-pandemic levels. With a new variant of Covid already making its entry, it becomes critical for the retail industry to be ready for the impact of the pandemic.

Amudha Ranganathan, Executive Director of the CavinKare Group of Education Institutions, believes that Covid may make a comeback. "In the event that this occurs, so we have to prepare themselves to some level," Ranganthan added.

"We now see that many retailers have begun to provide their items online, and some have even begun to provide home deliveries so that people can enjoy the ease of having basics delivered at their doorstep," she said. Ankit Agrawal, Director of top FMCG business Mysore Deep Perfumery House (MDPH), has a different take on the Covid danger looming strong in the current context.

"Covid will have a significant influence on the Indian retail industry since we have received conflicting information on the severity and impact of the epidemic in recent years," he added. Agarwal is convinced that Indian shops would be able to deal with Covid if the necessity arises. "As we have seen, right from the roadside

vegetable vendors to high end stores, payments have been digitized, which has eased the transaction process," he said. He went on to remark, "The government has been helpful in ensuring that throughout the epidemic, vital items like milk, fruits, vegetables, agarbatti, and so on reached customers at their doorstep, which is still ongoing."

Dr. Kottala Sri Yogi, Associate Professor (Operations), KLH Global Business School, Hyderabad, is positive that even if the Covid wave strikes again, the retail sector is ready for it. "Because the vast majority of the Indian population is vulnerable to natural immune/vaccine immunity, even if covid strikes again, the impact will be minor," he added.

"Compared to previous waves of covid, extraordinary demands will be reduced. On the other side, the impact on vital commodities from sourcing, supply chain management, logistics and retailing can be expected," he noted. Aside from the Retailers Association of India's readiness of workers in distribution warehouses, help centres and facilities to workers supporting ecommerce through distribution and other essential support functions, he

suggested that retailers providing essential services contact vendors and logistics service providers.

According to Krishan Gopal, Associate Professor at Lovely Professional University, the retail industry would not abandon its multi-channel strategy or its markets as business-to-business and direct-to-consumer following the lessons learnt from the pandemic disruptions.

"In India, major developments are taking place in the retail industry. It's mostly due to the development of internet shopping and the unexpected decline of brick-

and-mortar establishments selling a variety of items," he explained. However, few enterprises have been able to compete head-on with larger stores and maintain a dual presence, while there are other businesses that focus only on internet sales, he added.

Following the lessons learned from pandemic-induced disruptions retail players will maintain their multi-channel strategy and marketplaces like as Business to Business (B2B) commerce and Direct to Consumer (D2C), while also focusing on diversifying their supply sources.

## **OBJECTIVE OF THE STUDY:**

- The main objective of this study is to apply modern technology to sales and get the meaningful insights from it.
- Accurate analysis can shows the pain points of the customers and also it appears new strategies to perform the sales operations.
- It helps to find out the total purchases and customer churn rate.
- Sales analytics offers many features including Automation etc.

## **NEED FOR THE STUDY:**

- Need for the Sales Insights are very essentials now days.
- As the technology gets modernize the market conditions get more competitive compared to past.

- Organization must want to deep dive into the analytics as to improve the sales for profit maximization and also to minimize the cost .
- Sales analytics plays an important role in the organization if it applied effectively and efficiently.
- Sales analytics Personalize outreach with a better understanding of account and contact-level engagement activity and a 360-degree view of the account journey through Journey Events.

## **RESEARCH METHODOLOGY:**

I choose the secondary data for the analysis purpose rather than primary because as we all knows that the process of collecting primary data is very time consuming and expensive task.

## **SOURCES**

- Websites
- Wikipedia
- Internet

## **DATA COLLECTION**

- The data was collected from personal observation of records.
- Internet

- Official websites of Sales and Marketing.
- Various other articles related to the Sales Insights and Data Analysis

## STATISTICAL TOOLS

- Microsoft Excel
- MYSQL Server
- Power BI (Dashboard Visualizations)

## LIMITATION OF THE STUDY:

- The study was conducted with the available data and the analysis made on it.
- Due to limited period of study, it may not be in detailed.
- Time was one of the constraints during the study.
- The study is limited to the secondary data.

## **INTRODUCTION:**

### **What is data analytics?**

Most companies are collecting loads of data all the time—but, in its raw form, this data doesn't really mean anything. This is where data analytics comes in. Data analytics is **the process of analyzing raw data in order to draw out meaningful, actionable insights**, which are then used to inform and drive smart business decisions.

A data analyst will extract raw data, organize it, and then analyze it, transforming it from incomprehensible numbers into coherent, intelligible information. Having interpreted the data, the data analyst will then pass on their findings in the form of suggestions or recommendations about what the company's next steps should be.

You can think of data analytics as a form of business intelligence, used to solve specific problems and challenges within an organization. It's all about finding patterns in a dataset which can tell you something useful and relevant about a particular area of the business—how certain customer groups behave, for example, or how employees engage with a particular tool.

Data analytics helps you to make sense of the past and to predict future trends and behaviors; rather than basing your decisions and strategies on guesswork, you're making informed choices based on what the data is telling you.

### **How businesses use data analytics?**

Armed with the insights drawn from the data, businesses and organizations are able to develop a much deeper understanding of their audience, their industry, and their company as a whole—and, as a result, are much better equipped to make decisions and plan ahead.

# What's the difference between data analytics and data science?

You'll find that the terms "data science" and "data analytics" tend to be used interchangeably. However, they are two different fields and denote two distinct career paths. What's more, they each have a very different impact on the business or organization.

Despite their differences, it's important to recognize that data science and data analytics work together, and both make extremely valuable contributions to business.

## Key difference 1: What they do with the data

One key difference between data scientists and data analysts lies in what they do with the data and the outcomes they achieve.

A data analyst will seek to answer specific questions or address particular challenges that have already been identified and are known to the business. To do this, they examine large datasets with the goal of identifying trends and patterns. They then "visualize" their findings in the form of charts, graphs, and dashboards. These visualizations are shared with key stakeholders and used to make informed, data-driven strategic decisions.

A data scientist, on the other hand, considers what questions the business should or could be asking. They design new processes for [data modeling](#), write algorithms, devise predictive models, and run custom analyses. For example: They might build a machine to leverage a dataset and automate certain actions based on that data—and, with continuous monitoring and testing, and as new patterns and trends emerge, improve and optimize that machine wherever possible.

**In short:** data analysts tackle and solve discrete questions about data, often on request, revealing insights that can be acted upon by other stakeholders, while data scientists build systems to automate and optimize the overall functioning of the business.

## **Key difference 2: Tools and skills**

Another main difference lies in the tools and skills required for each role.

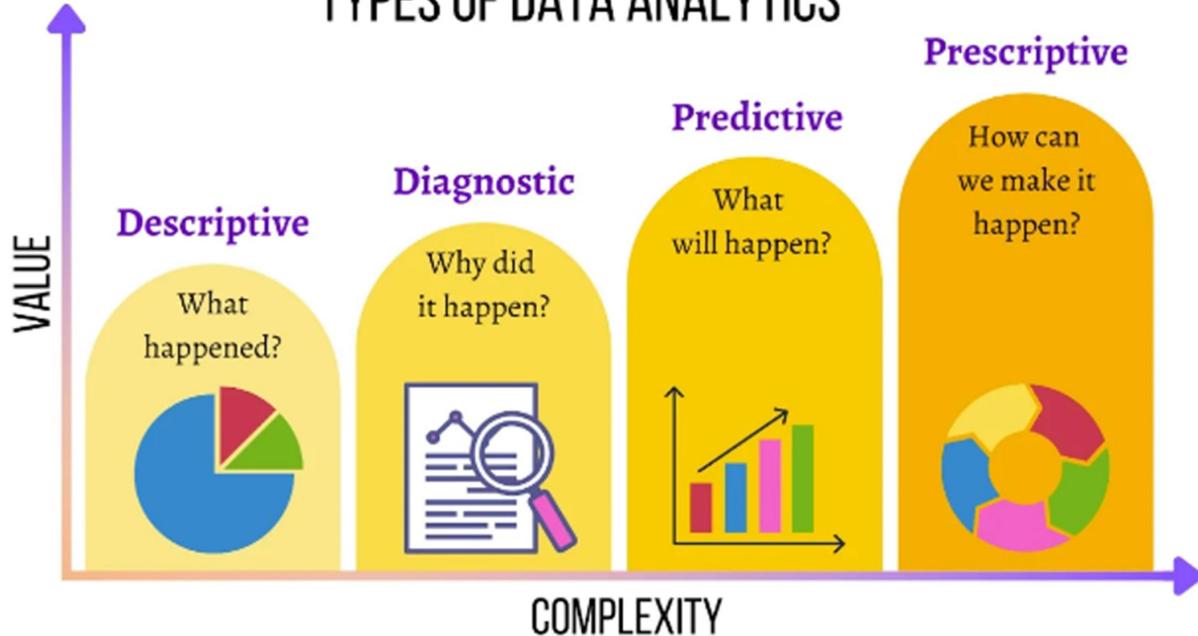
Data analysts are typically expected to be proficient in software like Excel and, in some cases, querying and programming languages like **SQL, R, SAS, and Python**. Analysts need to be comfortable using such tools and languages to carry out data mining, statistical analysis, database management and reporting.

Data scientists, on the other hand, might be expected to be proficient in **Hadoop, Java, Python, machine learning, and object-oriented programming**, together with **software development, data mining, and data analysis**.

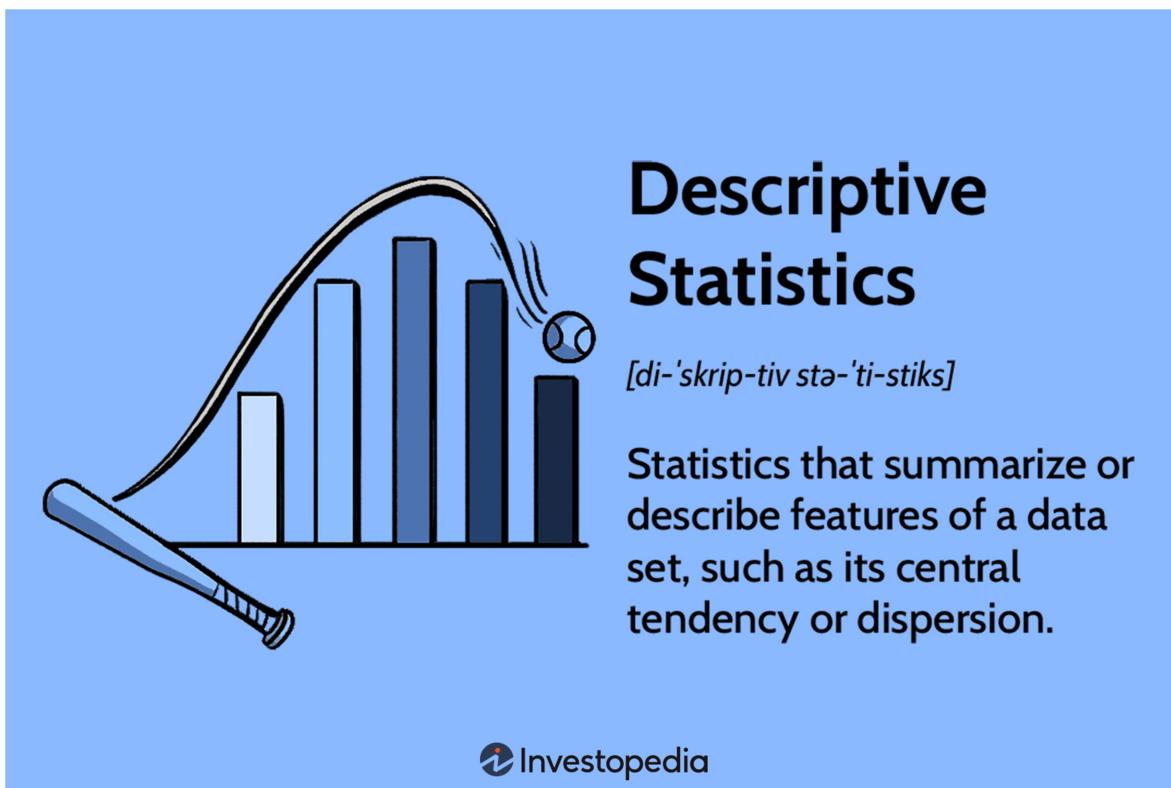
## **What are the different types of data analysis?**

Now we have a working definition of data analytics, let's explore the four main types of data analysis: **descriptive, diagnostic, predictive, and prescriptive**.

## TYPES OF DATA ANALYTICS



### DESCRIPTIVE ANALYTICS



Descriptive analytics is a simple, surface-level type of analysis that looks at **what has happened in the past**. The two main techniques used in descriptive analytics are data aggregation and data mining—so, the data analyst first gathers the data and presents it in a summarized format (that’s the aggregation part) and then “mines” the data to discover patterns.

The data is then presented in a way that can be easily understood by a wide audience (not just data experts). It’s important to note that descriptive analytics doesn’t try to explain the historical data or establish cause-and-effect relationships; at this stage, it’s simply a case of determining and describing the “what”. Descriptive analytics draws on [the concept of descriptive statistics](#).

## DIAGNOSTIC ANALYTICS

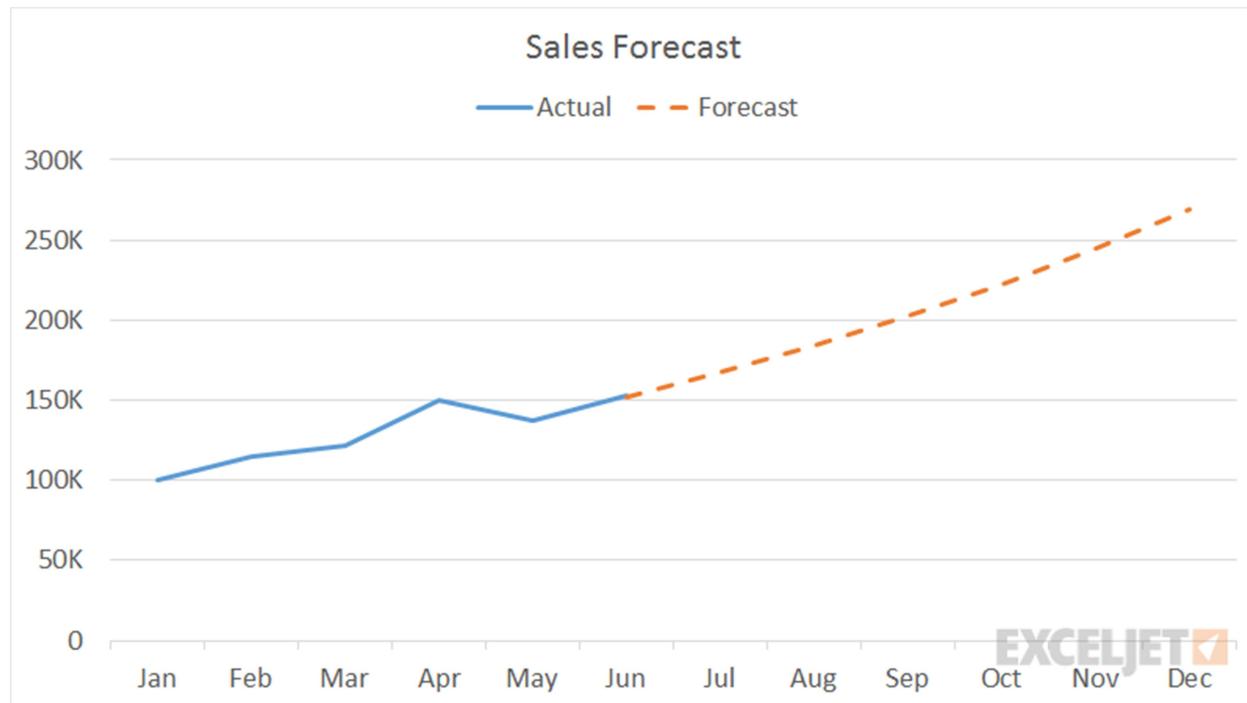


While descriptive analytics looks at the “what”, **diagnostic analytics explores the “why”**. When running diagnostic analytics, data analysts will first seek to identify anomalies within the data—that is, anything that cannot be explained by the data in

front of them. For example: If the data shows that there was a sudden drop in sales for the month of March, the data analyst will need to investigate the cause.

To do this, they'll embark on what's known as the discovery phase, identifying any additional data sources that might tell them more about why such anomalies arose. Finally, the data analyst will try to uncover causal relationships—for example, looking at any events that may correlate or correspond with the decrease in sales. At this stage, data analysts may use probability theory, regression analysis, filtering, and time-series data analytics.

## **PREDICTIVE ANALYTICS**

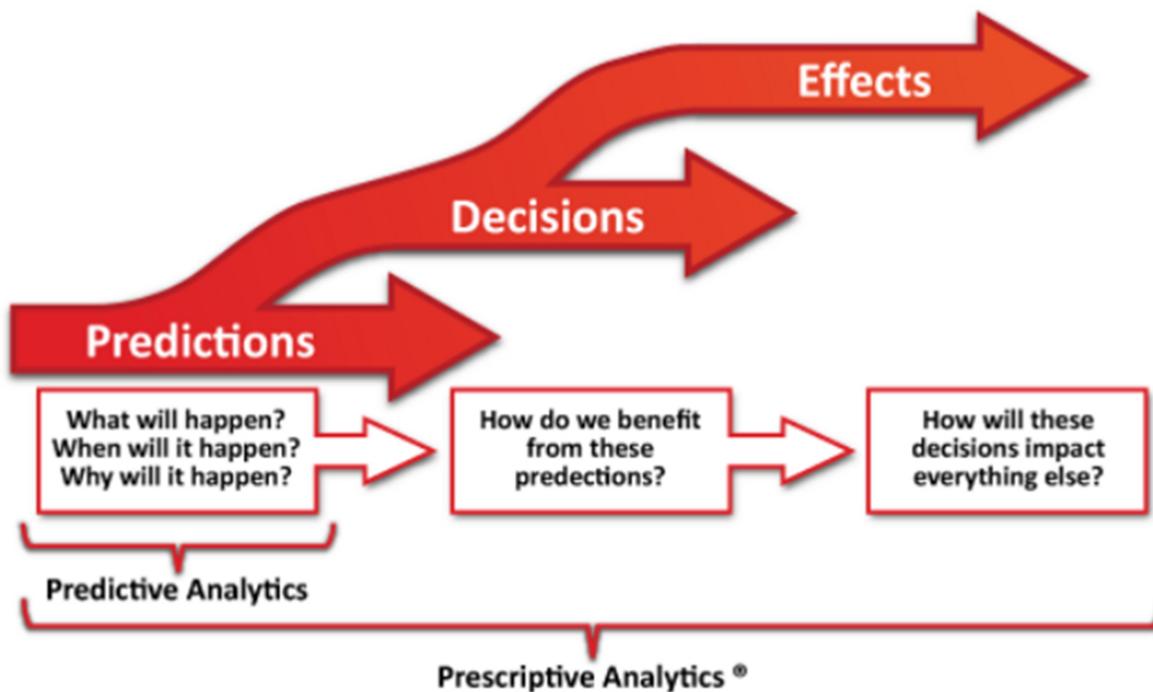


Just as the name suggests, predictive analytics tries to predict **what is likely to happen in the future**. This is where data analysts start to come up with actionable, data-driven insights that the company can use to inform their next steps.

Predictive analytics estimates the likelihood of a future outcome based on historical data and probability theory, and while it can never be completely accurate, it does eliminate much of the guesswork from key business decisions.

Predictive analytics can be used to forecast all sorts of outcomes—from what products will be most popular at a certain time, to how much the company revenue is likely to increase or decrease in a given period. Ultimately, predictive analytics is used to increase the business's chances of “hitting the mark” and taking the most appropriate action.

## **PRESCRIPTIVE ANALYTICS**



Building on predictive analytics, prescriptive analytics **advises on the actions and decisions that should be taken**. In other words, prescriptive analytics shows you how you can take advantage of the outcomes that have been predicted. When conducting prescriptive analysis, data analysts will consider a range of possible scenarios and assess the different actions the company might take.

Prescriptive analytics is one of the more complex types of analysis, and may involve working with algorithms, machine learning, and computational modeling procedures. However, the effective use of prescriptive analytics can have a huge impact on the company's decision-making process and, ultimately, on the bottom line.

The type of analysis you carry out will also depend on the kind of data you're working with. If you're not already familiar, it's worth learning about **the four levels of data measurement: nominal, ordinal, interval, and ratio**.

## Data Analyst Tasks and responsibilities

As you can see, the role of the data analyst means different things to different companies. However, there are some common threads that you'll find among most data analyst job descriptions. Based on real job ads, here are some of the typical tasks and responsibilities of a data analyst:

- Manage the delivery of user satisfaction surveys and report on results using data visualization software
- Work with business line owners to develop requirements, define success metrics, manage and execute analytical projects, and evaluate results
- Monitor practices, processes, and systems to identify opportunities for improvement
- Proactively communicate and collaborate with stakeholders, business units, technical teams and support teams to define concepts and analyze needs and functional requirements
- Translate important questions into concrete analytical tasks

- Gather new data to answer client questions, collating and organizing data from multiple sources
- Apply analytical techniques and tools to extract and present new insights to clients using reports and/or interactive dashboards
- Relay complex concepts and data into visualizations
- Collaborate with data scientists and other team members to find the best product solutions
- Design, build, test and maintain backend code
- Establish data processes, define data quality criteria, and implement data quality processes
- Take ownership of the codebase, including suggestions for improvements and refactoring
- Build data validation models and tools to ensure data being recorded is accurate
- Work as part of a team to evaluate and analyze key data that will be used to shape future business strategies

## Data Analysis process

### **Step 1: Define the question(s) you want to answer**

The first step is to identify **why you are conducting analysis and what question or challenge you hope to solve**. At this stage, you'll take a clearly defined problem and come up with a relevant question or hypothesis you can test. You'll then need to identify what kinds of data you'll need and where it will come from.

For example: A potential business problem might be that customers aren't subscribing to a paid membership after their free trial ends. Your research question could then be "What strategies can we use to boost customer retention?"

## Step 2: Collect the data

With a clear question in mind, you're ready to **start collecting your data**. Data analysts will usually gather structured data from primary or internal sources, such as CRM software or email marketing tools.

They may also turn to secondary or external sources, such as **open data sources**. These include government portals, tools like **Google Trends**, and data published by major organizations such as UNICEF and the World Health Organization.

## Step 3: Clean the data

Once you've collected your data, you need to get it ready for analysis—and this means **thoroughly cleaning your dataset**. Your original dataset may contain duplicates, anomalies, or missing data which could distort how the data is interpreted, so these all need to be removed. **Data cleaning** can be a time-consuming task, but it's crucial for obtaining accurate results.

## Step 4: Analyze the data

Now for the actual analysis! How you **analyze the data** will depend on the question you're asking and the kind of data you're working with, but some common techniques include regression analysis, cluster analysis, and time-series analysis (to name just a few).

We'll go over some of these techniques in the next section. This step in the process also ties in with the four different types of analysis we looked at in section three (descriptive, diagnostic, predictive, and prescriptive).

## Step 5: Visualize and share your findings

This final step in the process is where **data is transformed into valuable business insights**. Depending on the type of analysis conducted, you'll present your findings in a way that others can understand—in the form of a chart or graph, for example.

At this stage, you'll demonstrate what the data analysis tells you in regards to your initial question or business challenge, and collaborate with key stakeholders on how to move forwards. This is also a good time to highlight any limitations to your data analysis and to consider what further analysis might be conducted.

## 7. What tools and techniques do data analysts use?

Much like web developers, data analysts rely on a range of different tools and techniques. So what are they? Let's take a look at some of the major ones:

## Data analytics techniques

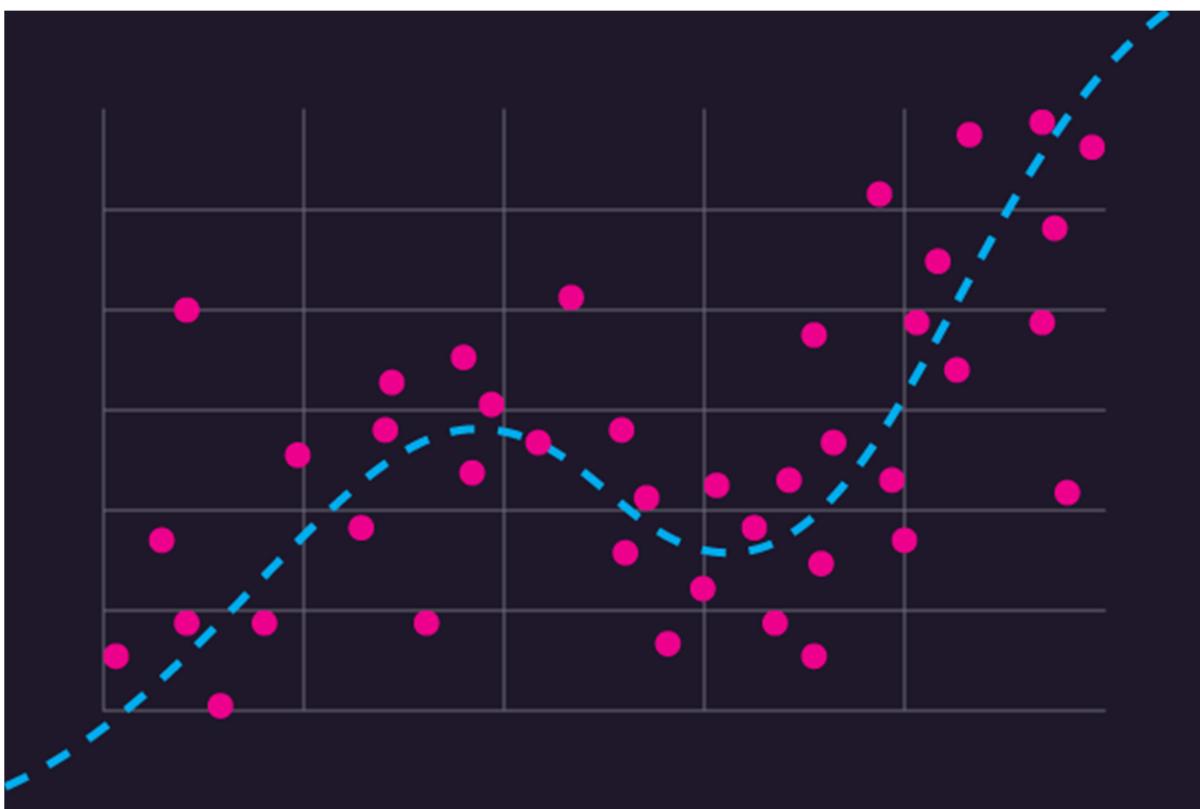
Before we introduce some key data analytics techniques, let's quickly distinguish between the two different types of data you might work with: **quantitative** and **qualitative**.

Quantitative data is essentially anything measurable—for example, the number of people who answered “yes” to a particular question on a survey, or the number of sales made in a given year. Qualitative data, on the other hand, cannot be measured, and comprises things like what people say in an interview or the text written as part of an email.

Data analysts will usually work with quantitative data; however, there are some roles out there that will also require you to collect and analyze qualitative data, so it's good

to have an understanding of both. With that in mind, here are some of the most common data analytics techniques:

## Regression analysis

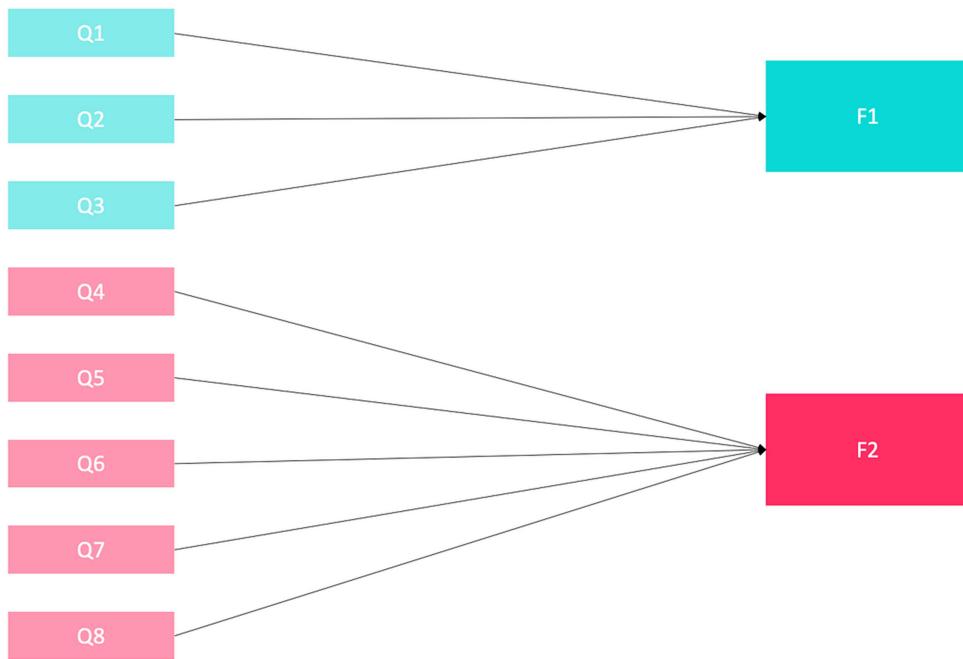


This method is used to estimate or “model” the relationship between a set of variables.

You might use this to see if certain variables (a movie star’s number of Instagram followers and how much her last five films grossed on average) can be used to accurately predict another variable (whether or not her next film will be a big hit). Regression analysis is mainly used to make predictions.

Note, however, that on their own, regressions can only be used to determine whether or not there is a relationship between a set of variables—they can’t tell you anything about cause and effect.

# Factor analysis



Sometimes known as **dimension reduction**, this technique helps data analysts to uncover the underlying variables that drive people's behavior and the choices they make.

Ultimately, it condenses the data in many variables into a few “super-variables”, making the data easier to work with. For example: If you have three different variables which represent customer satisfaction, you might use factor analysis to condense these variables into just one all-encompassing customer satisfaction score.

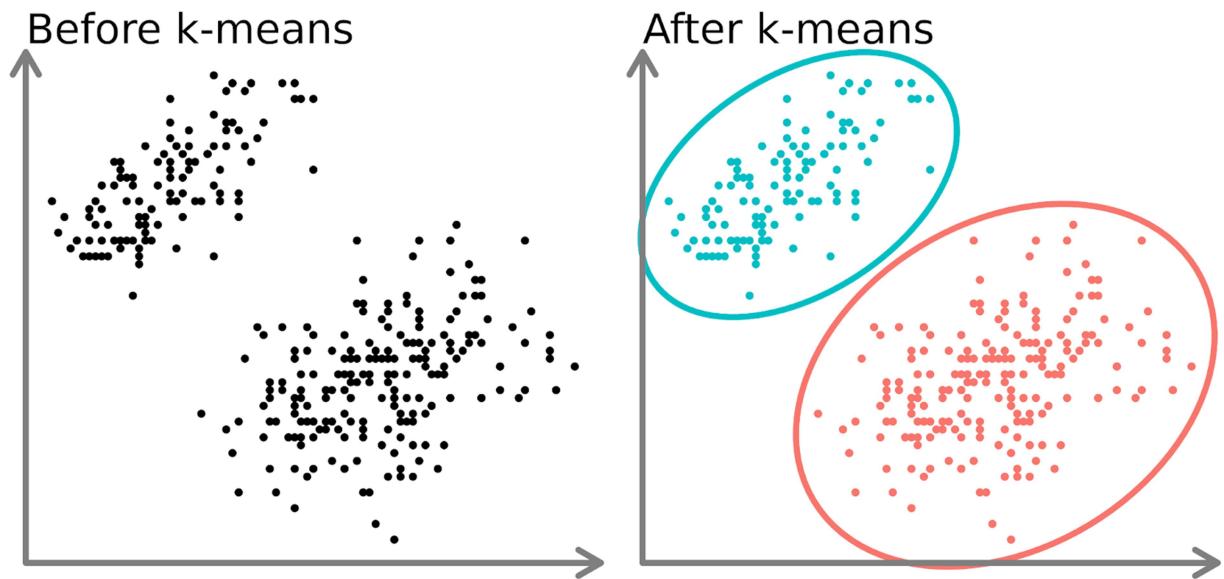
# Cohort analysis



A cohort is a group of users who have a certain characteristic in common within a specified time period—for example, all customers who purchased using a mobile device in March may be considered as one distinct cohort.

In cohort analysis, customer data is broken up into smaller groups or cohorts; so, instead of treating all customer data the same, companies can see trends and patterns over time that relate to particular cohorts. In recognizing these patterns, companies are then able to offer a more targeted service.

# Cluster analysis



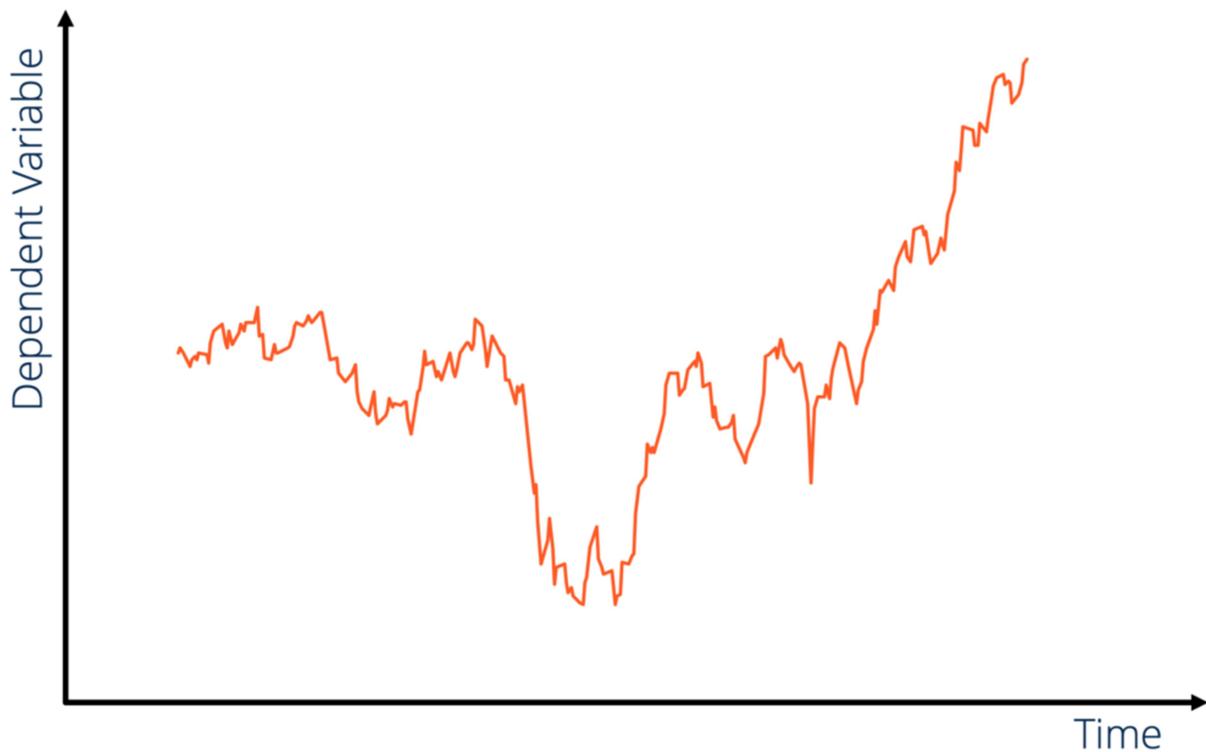
This technique is all about identifying structures within a dataset.

Cluster analysis essentially segments the data into groups that are internally homogenous and externally heterogeneous—in other words, the objects in one cluster must be more similar to each other than they are to the objects in other clusters.

Cluster analysis enables you to see how data is distributed across a dataset where there are no existing predefined classes or groupings. In marketing, for example, cluster analysis may be used to identify distinct target groups within a larger customer base.

## Time-series analysis

### Time-Series Analysis



In simple terms, time-series data is a sequence of data points which measure the same variable at different points in time.

Time-series analysis, then, is the collection of data at specific intervals over a period of time in order to identify trends and cycles, enabling data analysts to make accurate forecasts for the future. If you wanted to predict the future demand for a particular product, you might use time-series analysis to see how the demand for this product typically looks at certain points in time.

## Other data analytics techniques

These are just a few of the many techniques that data analysts will use, and we've only scratched the surface in terms of what each technique involves and how it's used.

Some other common techniques include:

- **Monte Carlo simulations**
- dispersion analysis
- discriminant analysis
- text or content analysis (a technique for analyzing qualitative data)

## Data analytics tools

Now let's take a look at some of the tools that a data analyst might work with.

If you're looking to become a data analyst, you'll need to be proficient in at least some of the tools listed below—but, if you've never even heard of them, don't let that deter you! Like most things, getting to grips with the tools of the trade is all part of the learning curve.

Here are the top ones:

# Microsoft Excel



Excel is a software program that enables you to organize, format, and calculate data using formulas within a spreadsheet system.

Around for decades, this tool may be used by data analysts to run basic queries and to create pivot tables, graphs, and charts. Excel also features a macro programming language called Visual Basic for Applications (VBA).

You can learn the ropes with our guide to **the top data analysis features in Microsoft Excel**.

# Tableau



**Tableau** is a popular business intelligence and data analytics software which is primarily used as a **tool for data visualization**.

Data analysts use Tableau to simplify raw data into visual dashboards, worksheets, maps, and charts. This helps to make the data accessible and easy to understand, allowing data analysts to effectively share their insights and recommendations.

## SAS



SAS is a command-driven software package used for carrying out advanced statistical analysis and data visualization.

Offering a wide variety of statistical methods and algorithms, customizable options for analysis and output, and publication-quality graphics, SAS is one of the most widely used software packages in the industry.

## Rapid Miner



This is a software package used for **data mining** (uncovering patterns), text mining, predictive analytics, and machine learning.

Used by both data analysts and data scientists alike, Rapid Miner comes with a wide range of features—including data modeling, validation, and automation.

## Power BI



**Power BI** is a business analytics solution that lets you visualize your data and share insights across your organization.

Similar to Tableau, Power BI is primarily used for data visualization. While Tableau is built for data analysts, Power BI is a more general business intelligence tool.

## **CHAPTER-2**

# **LITERATURE REVIEW**

**LITERATURE REVIEW**

There are several previous kinds of research about Business Intelligent. **Banerjee & Mishra (2015)** conducted study on executives of a major food retailer in India and explored their perspectives on supply chain management practices, competitive advantage, and firm performance; to assess the importance accorded to the application of Business Intelligence (BI) in their operations. Nine dimensions for SCM practices and four dimensions for competitive advantage are identified which are found to strongly relate to each other. The dimensions of SCM also strongly relate to firm performance. Though information sharing with suppliers and their inclusion in strategic decisionmaking emerge as key dimensions of SCM, their impact on competitive advantage is perceived to be insignificant by retailers.

**Schlesinger & Rahman (2015)** conducted a study about Self Service Business Intelligence in disruptive technologies. They proposed an approach to the reorganization of consumption data using a comprehensive semantic layer for Self-Service Business Intelligence to provide a uniform business view of the data including all business terms and conditions. They identified the key terms, definitions, and nomenclatures of enterprise business data based on practical experience in Self-Service Business Intelligence project implementations.

**Fink (2017)** developed and tested a research model of BI value creation that is firmly anchored in both streams of research. The analysis draws on the resource-based view and on conceptualizations of organizational learning to hypothesize the paths by which BI assets and BI capabilities create business value. The research model is first assessed in an exploratory analysis of data collected through interviews in three firms and then tested in a confirmatory analysis of data collected through a survey. They initially assess the model with qualitative data collected in three organizations, then test the hypotheses with cross-sectional data collected from managers.

**Vajirakachorn & Chongwatpol (2017)** studied a way to integrate a BI framework to manage and turn data into insights for festival tourism in Thailand. They translated massive data about products tourist purchase, services they experience, destination choices they value, and accommodations they select at the events into meaningful information in order to increase satisfaction and boost revenues and profits. They combined the architecture of database management, business analytics, business performances management, and data visualization.

**Gowthami & Pavan Kumar (2017)** conducted a study about the comparison study of the development of enterprise dashboard using few most popular Business Intelligent (BI) Tools which are SpagoBI, Power BI, Tableau, QlikSense, and Jaspersoft. All the tools that have been compared are SSBI Tools. It was based on the ease of use, support in terms of training and minimal initial cost. At the end of the result, a sample dashboard has been developed using one of the tools which are Power BI to demonstrate the feasibility of the same for the Business data visualization.

**Gaardboe (2017)** assessed the BI in Public Hospitals. In this study, it was empirically tested on 12 public hospitals in Denmark. The study aimed to investigate the factors that contributed to BI success. The result of this study showed that there are several factors affect the success of BI, it provided empirical support for the role of user satisfaction as a mechanism that mediates the relationship which are information quality, system quality, and individual impact. (Sidiqi & Mukhi, 2011) conducted an independent study that dealt with the comparison among the available BI tools. They conducted a comparison study between Microsoft SQL Server and the Pentaho Open Source. The study gives the insight view of leading BI tools and proposes BI solution as ease of use along with some considerations which are: BI deployment challenges in an organization, the complexity of BI tools and interfaces, cost of BI software and per-user licenses, difficulty accessing relevant, timely or reliable data. The study

provided a better understanding of BI tools with respect to Industry requirement at that time.

**Lennerholt (2018)** studied about the implementation challenges of SelfService Business Intelligence which focused on the literature review. Power users which are the IT will have problems when the usage of frequency from traditional BI increases. Then the Self-Service Business Intelligence (SSBI) approach has created that can enable users to be more self-reliant and less dependent on power users. Although the approach of SSBI promises more benefits compared to a traditional BI system, many organizations fail to implement SSBI. Then in their paper also being discussed six SSBI challenges that related to “Access and use of data” and four challenges related to “Self-reliant users”. Awareness of these ten challenges can help practitioners to avoid common pitfalls when implementing SSBI, as well as to guide SSBI researchers in focusing their future research efforts.

**Bordeleau (2018)** studied using systematic literature review with two objectives in mind: understanding value creation through BI in the context of Industry 4.0 (I4.0) and identifying the main research contributions and gaps. The results show most studies focus on real-time applications and integration of voluminous and unstructured data. For business research, more is needed on business model transformation, methodologies to manage the technological implementation, and frameworks to guide human resources training.

**Vamsi & Bose (2018)** studied a novel process-based framework and proposed to enable an end-to-end analysis of technology-driven performance measurement system (PMS) implementation in an organization. To validate their proposed framework a case study-based approach was employed. The framework has been used to study PMS implementation in a large manufacturing firm in India. The analysis of the case

provides key lessons about successful planning, execution and adoption of a BI based PMS as well as identification of critical success factors (CSF) in the implementation of PMS, that would be of interest to organizations planning to implement a similar system.

**D'Arconte (2018)** studied the implementation of BI applied in small size for-profit companies. They tried to find a way to apply it in small size companies focusing on two critical aspects, namely customer's profitability and their satisfaction level that, especially if considered in their reciprocal interaction, may have a great impact on companies' outcomes though using simple technologies.

**Radenkovic (2018)** studied about harnessing BI in smart grids: A case of the electricity market. They analyzed the analytical aspects of smart grids and offers insight into the development of BI. They designed a BI solution for the Serbian electricity market operator "Elektromreža Srbije". The research results showed that the proposed approach led to more effective market management in data-rich smart grid environments, while still being dynamic enough to adapt to frequent rule changes in the still-developing grids and their markets.

**Shrivastava (2018)** studied the comparative study of BI tools in the market. They conducted a report based on several studies that performed the comparison and deep analysis of BI tools. The survey report analyzed the literature review study of each author and their own objective. They concluded that there are quite BI tools in the market and have to consider based on the purpose of business and organizations. Based on several previous researches studied above, it can be seen that the application of BI can be used in various fields such as education, economics and business, tourism, and government especially in the business itself for increase their sales. The purpose of BI is to facilitate an organization in the decision-making process so that the

application of BI is a useful thing to do at this time. Back to the previous research above, there have been no studies regarding the comparative or comparison study of SelfService Business Intelligence Tools while in this era the SSBI tools are the main software not only for startup and SME companies but also for the big and advance enterprises

**According to Gartner (2019)** Business intelligence (BI) is an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance.

**According to Rouse (2019)** Business intelligence (BI) is a technology-driven process for analyzing data and presenting actionable information to help executives, managers, and other corporate end-users make informed business decisions. BI encompasses a wide variety of tools, applications and methodologies that enable organizations to collect data from internal systems and external sources, prepare it for analysis, develop and run queries against that data, and create reports, dashboards and data visualizations to make the analytical results available to corporate decision-makers, as well as operational workers.

**CHAPTER-3**

**COMPANY PROFILE: “ATLIQ PVT LTD”**

## **ABOUT THE FOUNDER:**



**Dhaval Patel** a **DATA, Software, and Ed-tech entrepreneur** with 17+ years of industry experience (Ex. **Bloomberg, NVIDIA**)

At Codebasics he helps people become data professionals also provide courses, boot camps, and corporate training on (1) data analytics (2) data science (3) data engineering. He not only upskill people but help them become TRULY job ready by providing them mentorship on industry-level data project execution, resume and interview mentorship, etc. Our courses have the following features that make learning ASTRONOMICALLY effective for a learner,

- 1) Simple explanations using the real-life analogy
- 2) Industry-style project-based learning
- 3) Combination of tech and soft skills
- 4) Creative, FUN storytelling and video production that keeps a learner highly engaged

For Corporate training send me a message directly. For individual training visit [codebasics.io](http://codebasics.io)

At AtliQ (his software and data venture), we help businesses grow to their fullest potential by helping them build scalable software products and DATA solutions.

If you need their services (1) software development (2) data services (i.e. data engineering, data analytics, AI/ML) (3) corporate training etc. then please get in touch with me here on Linkedin or drop me an email at [dhaval@codebasics.io](mailto:dhaval@codebasics.io)

Here is the list of services that AtliQ provides,

1. Product Development
2. Product Discovery
3. Custom Software Development
4. Mobile App Development
5. Data Analytics & AI Solutions
6. E-commerce/CMS Development
7. Digital Marketing

We use the following tools for each of our services:

#### **Mobile App Development:**

1. React Native
2. Flutter

#### **Full Stack Web Development:**

1. NodeJS
2. ReactJS
3. VueJS
4. Laravel

#### **CMS/Websites:**

1. WordPress
2. Laravel
3. Wix

**E-commerce:**

1. Shopify
2. WooCommerce
3. Custom Development in the technology of your choice

**Digital Marketing:**

1. Search Engine Optimization (SEO)
2. Pay Per Click (PPC)
3. Social Media Marketing (SMM) & Branding

## About the company



AtliQ was established in 2017 as an IT services company to help businesses integrate their processes with automated tools. Over the past 5 years, AtliQ has successfully provided many businesses with custom solutions that help them scale, or streamline their processes, reduce overhead costs and increase overall efficiency.

As a multinational company located in the United States and India, we cater to businesses from all corners of the world. Our insightful strategies and reliable processes have helped us assist various industries with remarkable results. Our

resourcefulness has led to satisfied clients, successful collaborations, and rapid growth.

It is our mission to continue serving companies with innovative software solutions and assisting them in their digital transformation.

## **CORE VALUES**

Our culture and values define who we are. Culture influences how we treat one another. For us, these are not mere words on a page, but these are the words that matter.

### BOTTOM-UP CULTURE

We worry top-down, but we invest bottom-up. – Seth Klarman

Our people are extraordinary when it comes to little more participation which brings in a large impact.

## **TRANPARENCY**

We don't hide the secret sauce. The team is in terms with everything- from Woohoo! Victory to Oh! A fallback. We believe in keeping the team updated with success and failures.

## **ETHICS**

Big work brings in a big responsibility. A big team holds bigger responsibilities. Without a solid internal culture, it would be nearly impossible to take on this responsibility in a sustainable way.

## **CUSTOMER CENTRIC**

Becoming a customer centric business is focused on providing a positive experience to the customer before as well as after sales to drive repeat business and enhance loyalty, thus improving the business.

## **DIVERSITY AND INCLUSION**

Diversity & Inclusion is more than lack of politics. We outpace our competitors by respecting & leveraging the unique needs, perspectives and potential of all team members.

## **EMPATHY**

Every individual act of compassion and kindness, brings harmony to the entire company. Yes, we did tweak the Dalai Lama's quote. This makes them enjoy coming to work rather than treating it as a mere burden.

## **Why should you work with AtliQ?**

### **01.Partners in your growth**

You want results and that's what we are fond of. Our team works with a passion for details, working with a proactive approach toward your success. We are creative while keeping a close eye on the calendar and your budget.

#### **• Web Development**

We are proficient in handling emerging technologies, building innovative enterprise-grade products, and taking your business to profitability 2x faster.

- **Mobile Application**

We are a mobile app development agency that knows the secret of how to convert ideas into industry-leading products.

- **Product Development**

We are your strategic product engineering partner who helps you build products designed to cater to every customer requirement.

- **Data Analytics & AI**

We guide you through the process of making data-informed decisions for your business.

- **Digital Marketing**

We help you turn your growth goals into reality with hyper-targeted brand awareness optimization.

- **Business Consulting**

We are your digital transformation coach, guiding you to deliver a faster, flexible & customer-focused experience.

## **02. We have done it before**

With years of experience in the market, our vision along with creative thinking will make sure your project is a success. Even though your problem/ requirement is not new to us, our solutions are always new.

### **Moontower Tickets**

Mobile App Development, Product Development, Web Development

The traditional way of purchasing tickets for any small or midscale event requires the customer to travel to the actual place where the event will be held, stand in queue, and purchase the ticket.

## **Uber Nails**

Mobile App Development, Product Development, Web Development

Waiting long for getting beauty service can be frustrating for the clients while allocating the resources effectively can be challenging to the salon.

## **La Benito**

Mobile App Development, Product Development

La Benito is a system that will help restaurants to optimize and control their restaurants. The system setup menu online and the customers easily place their orders from the app.

## **Edumame**

Mobile App Development, Product Development

The client wanted a product that helped tutors and students connect, schedule, and conduct classes. Digitally through a single platform.

## **Bleef**

Mobile App Development, Product Development

Bleef is a mobile application for discourse management through which people of different gender, sexuality, and race can share their discourse of commercial or public places that they visit in the United States of America to indicate their comfort/safety.

## **Pre-lease Property**

Mobile App Development, Product Development, Web Development

The purchase and sale of commercial property is a complicated and time-consuming process.

## **VisaPro360**

Product Development, Web Development

The purpose of this software is to serve as one platform for the visa service providers to manage all their activities. This project aimed to become a highly versatile system.

## **Quite Clear**

Web Development

Thirdinrev is a software designed to let orthodontists and dental professionals order Clear Aligners and 3D Models.

## **Retail Sales Performance Analytics**

Data Analytics & AI, Product Development, Web Development

Nobody in the retail organization has complete insight into what is happening across multiple hierarchies – of course, everyone has a general overview of one side – but not in-depth.

## **OSI Task Management**

Web Development

Managing tasks was a tiring job and tracking down every employee and regulating their work was becoming very difficult.

## **Fraud Analytics**

Data Analytics & AI, Product Development, Web Development

Built a heuristics-based GOFAI engine to process & analyze all the transactions, and get a bird's eye view to highlight frauds and discrepancies.

## **Digital Perfume Catalogues**

Mobile App Development, Product Development

Alpha design tech is a digitized perfume catalog app for customers and wholesalers who wish to use a digital platform to explore the specifics of perfumes.

## **Work with us**

Join us as we help you build your career, it's not just a job.

We are always open to talented people. If you believe, you'd be a great fit for our company, feel free to apply for one of our vacancies below or send your CV at [careers@AtliQ.com](mailto:careers@AtliQ.com)

Don't forget to tell us a bit more about yourself – something valuable, which we won't find in a resume.

The image shows a grid of ten job openings, each with a small icon, the job title, experience requirements, and the number of vacancies. A 'Read More' link is provided for each.

| Current Openings  |  |   |  |
|---|--|---|--|
| .NET Core Developer<br>Experience: 2 to 4 Years<br>Vacancies: 02<br><a href="#">Read More</a> | React Native Developer<br>Experience: 2 to 4 Years<br>Vacancies: 01<br><a href="#">Read More</a>     | Flutter Developer<br>Experience: 1 to 4 Years<br>Vacancies: 01<br><a href="#">Read More</a> |  |
| Product Owner<br>Experience: 3 Years<br>Vacancies: 01<br><a href="#">Read More</a>            | Laravel Developer<br>Experience: 2 to 4 Years<br>Vacancies: 01<br><a href="#">Read More</a>          | Content Writer Intern<br>Experience: Fresher<br>Vacancies: 02<br><a href="#">Read More</a>  |  |
| Video Editor<br>Experience: 3 to 5 Years<br>Vacancies: 01<br><a href="#">Read More</a>        | PPC Executive<br>Experience: 3+ Years<br>Vacancies: 01<br><a href="#">Read More</a>                  | Marketing Executive<br>Experience: 2 Years<br>Vacancies: 01<br><a href="#">Read More</a>    |  |
| QA Engineer<br>Experience: 2 to 4 Years<br>Vacancies: 02<br><a href="#">Read More</a>         | Business Development Executive<br>Experience: 4+ Years<br>Vacancies: 01<br><a href="#">Read More</a> |   |  |

## Our Interview process

The hiring process can be exciting and daunting at the same time! We'd like to offer some clarity and insight into the hiring process at AtliQ, in hopes that it makes all our candidates feel more at ease. Here are the steps we follow when considering every job application.

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01

Online Application

02

Screening Application

03

Screening Call

04

Technical Interview

05

Practical Interview

06

HR Round

07

Offer and Acceptance Letter

08

Pre-Boarding & On-Boarding Process

## Moments of celebration at AtliQ

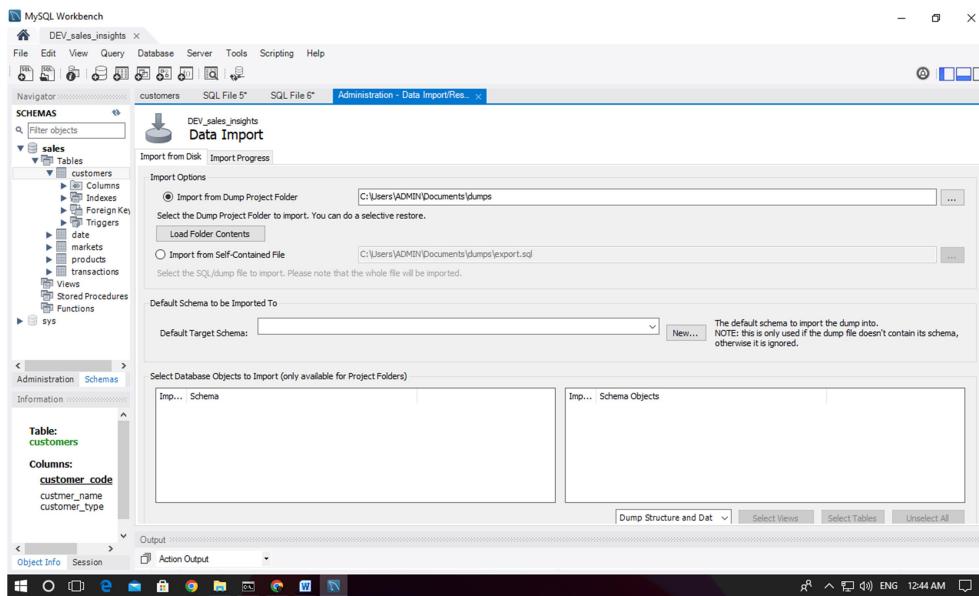


**CHAPTER- IV**

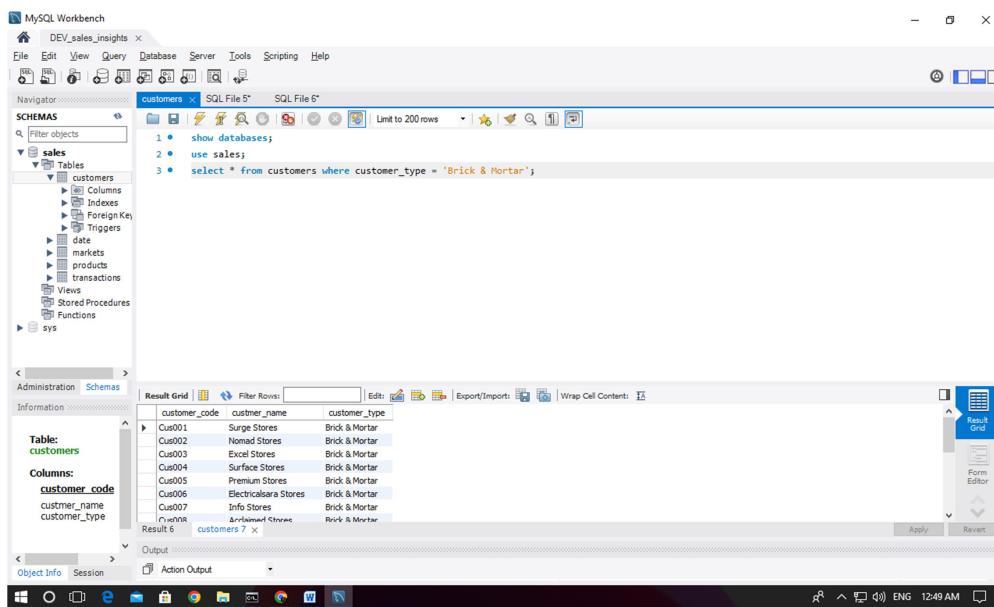
**DATA ANALYSIS AND INTERPRETATIONS**

# DATA LOADING AND DATA CLEANING

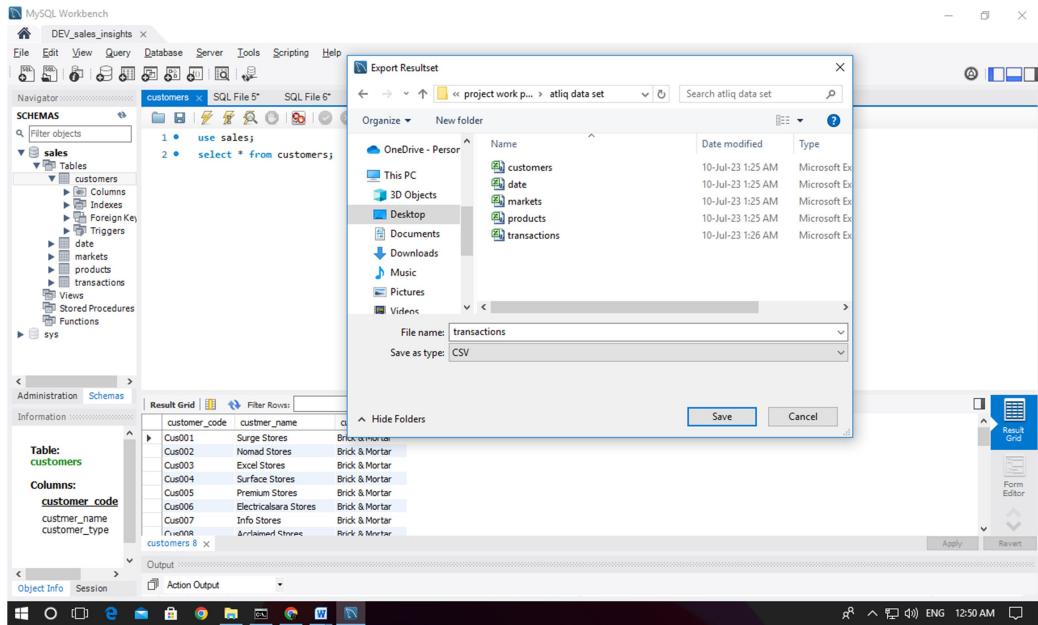
- Load the data in SQL by providing the drive location



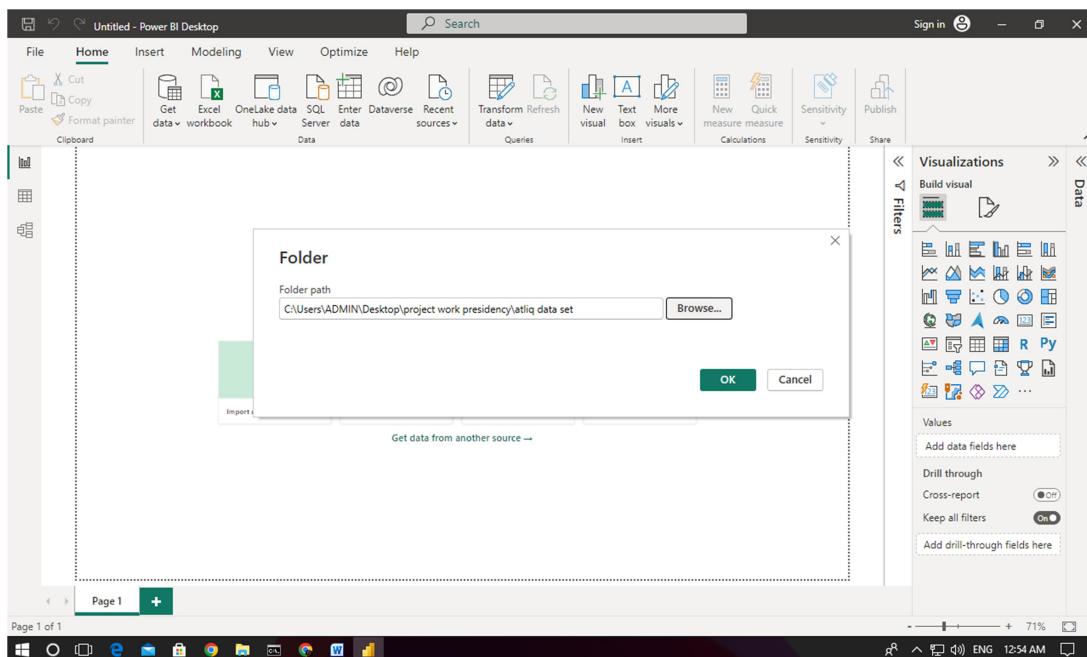
- Run some queries to know whether the data is in a proper format.



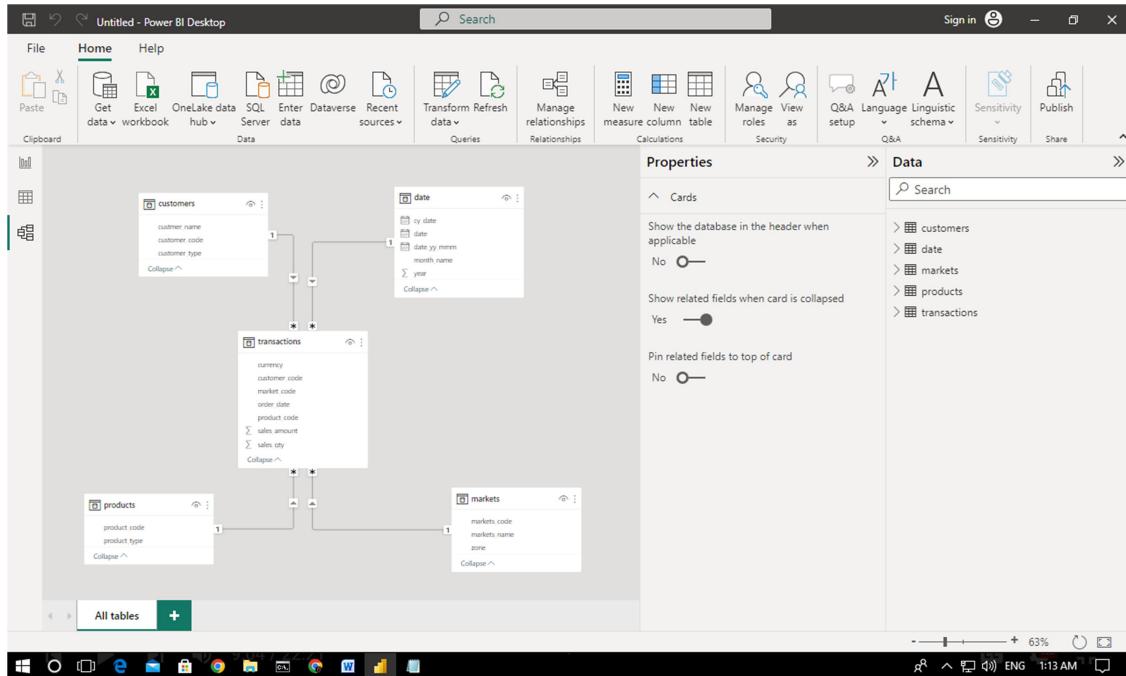
➤ At last create the CSV files of the particular data tables.



➤ Now load all those CSV files in POWER BI application.

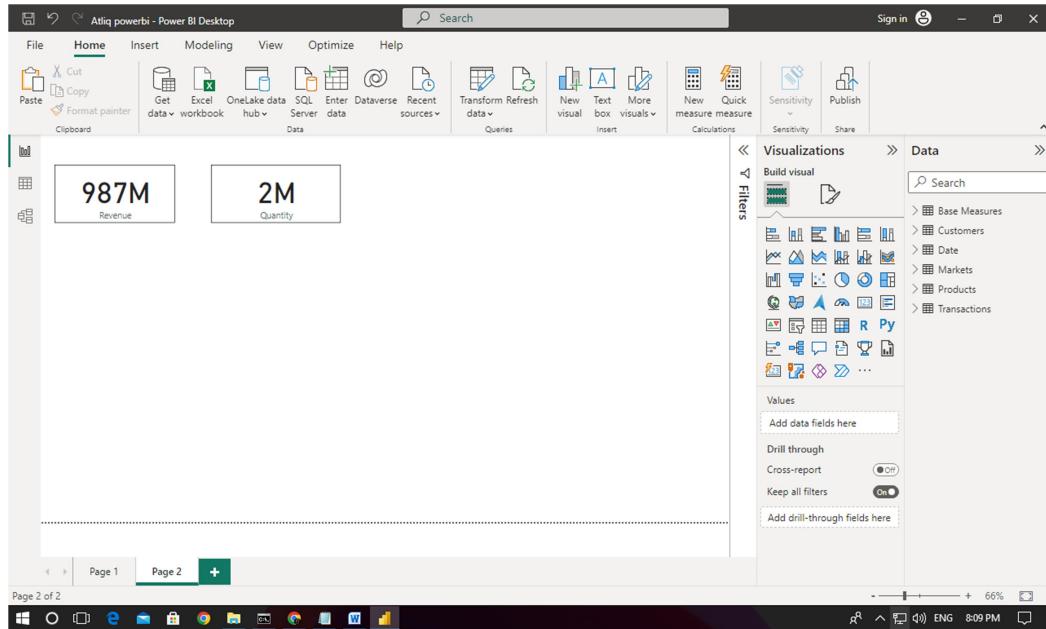


➤ Now make the relationships between the tables for the analysis



➤ Remove the null values from the data tables by using transformation function in PowerBI.

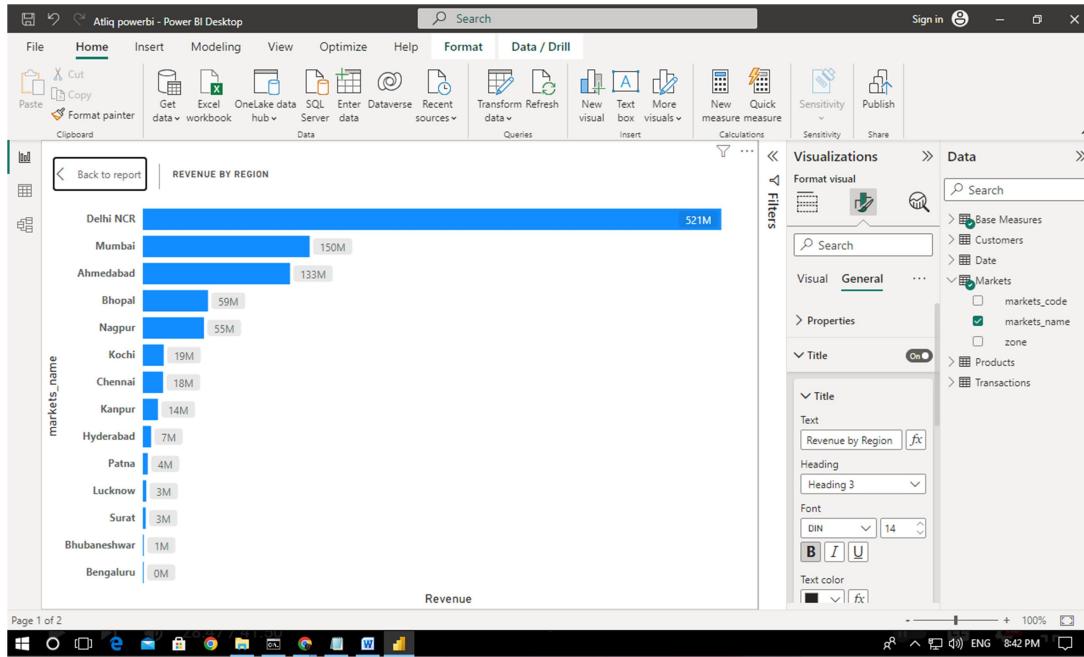
# DASHBOARDS AND ANALYSIS



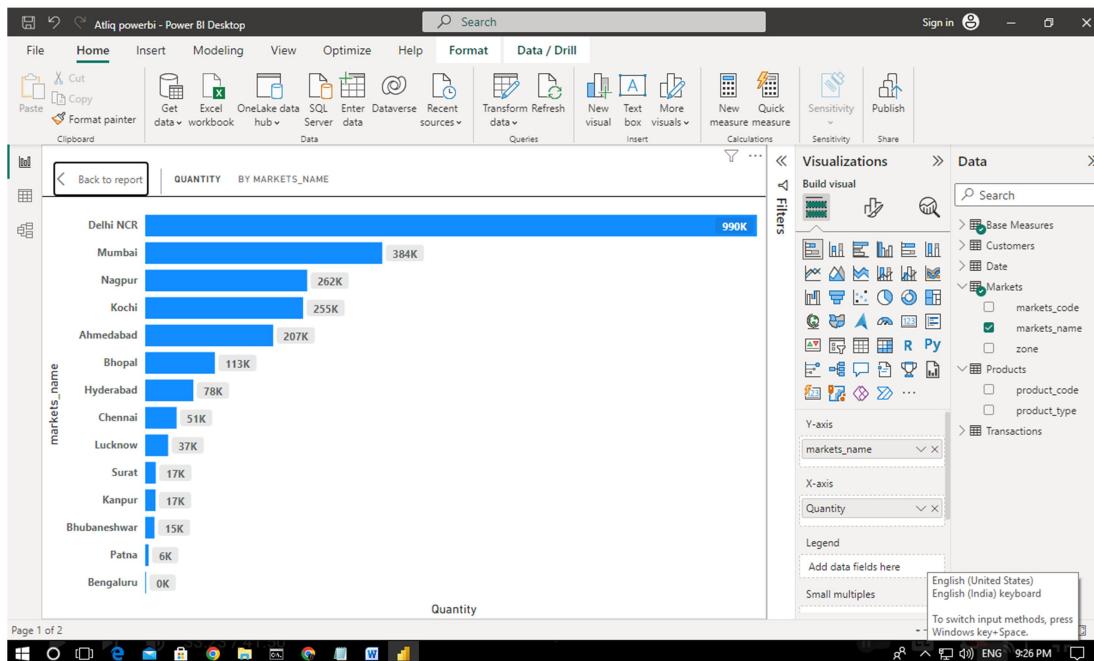
## INTERPRETATION

**Revenue:-** The revenue card shows all the aggregate sales amount as we can see in the above dashboard the sales revenue of the company is 987M.

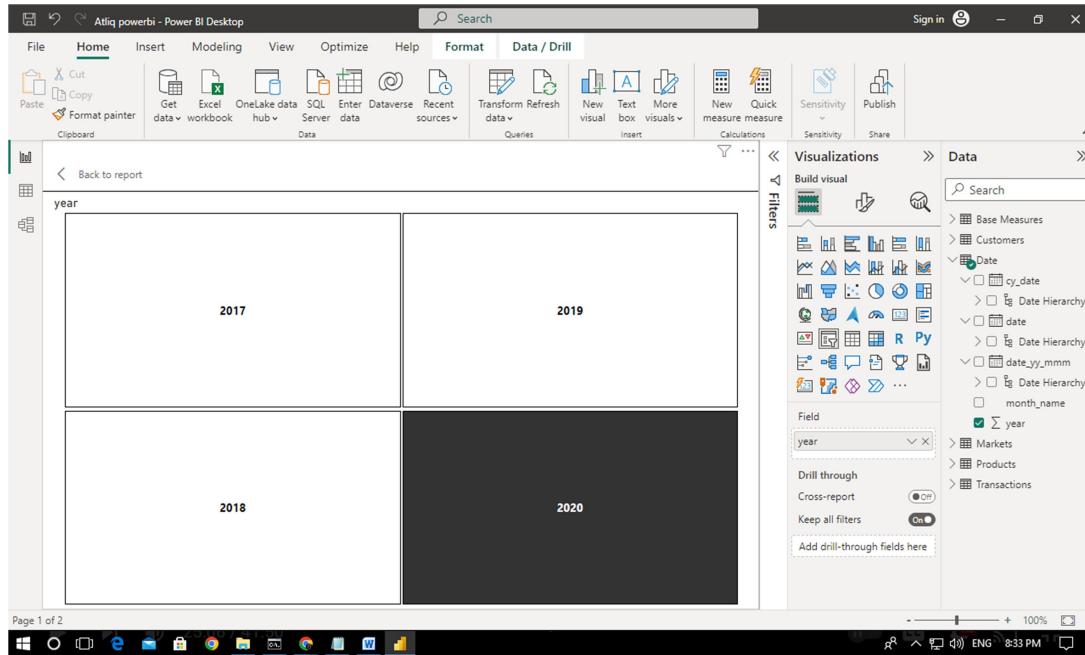
**Quantity:-** The quantity card shows the total sale quantity of the product as it is mentioned in the above dashboard 2M.



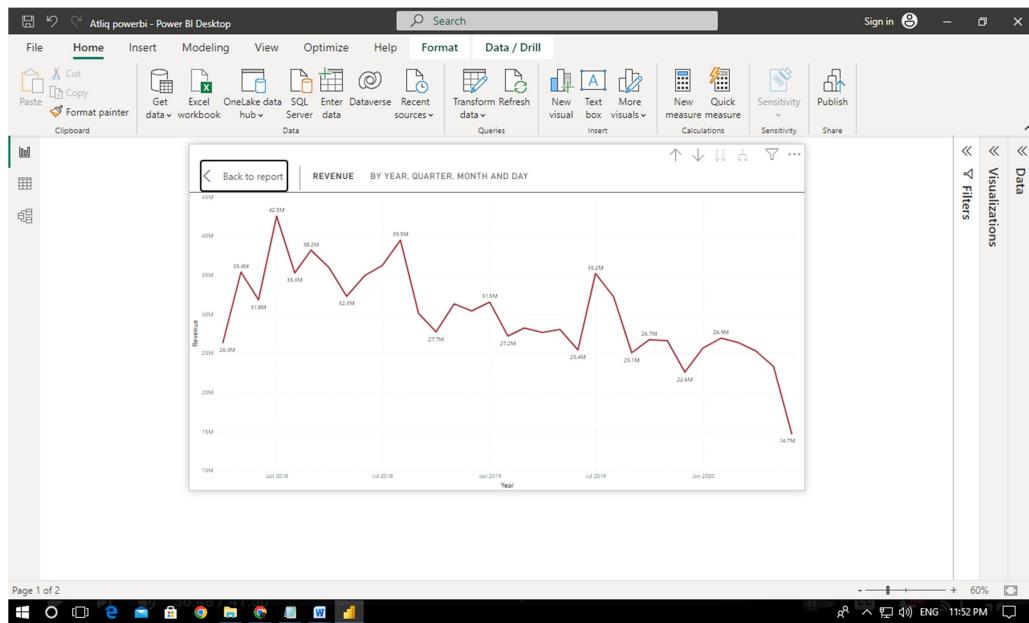
**Revenue by Market Region:-** This Horizontal bar chart shows the total sales revenue earned by each Market Region which shows the Delhi has the highest sale so we have better opportunities to launch new products in it and as well as surat has the least sale so need to improve the market research on that region.



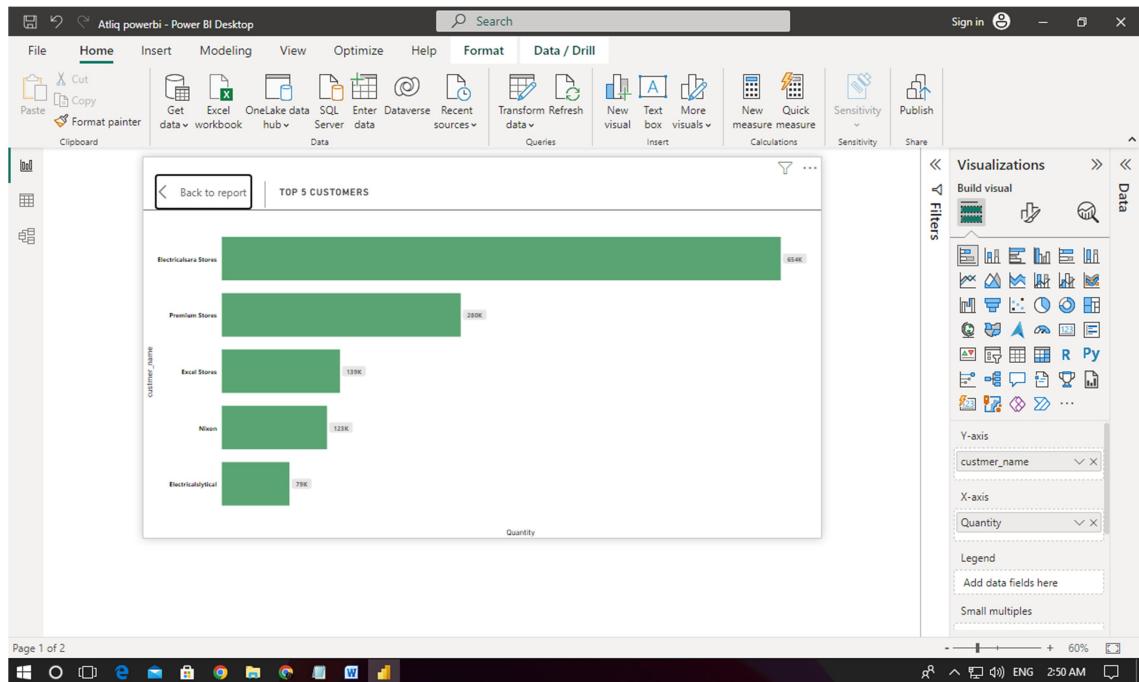
**Quantity by Market Region:-** This bar chart shows the total sales quantity by Market Region where we can see the Market is lead in Delhi, Mumbai then Ahmedabad and Bengaluru has no sales.



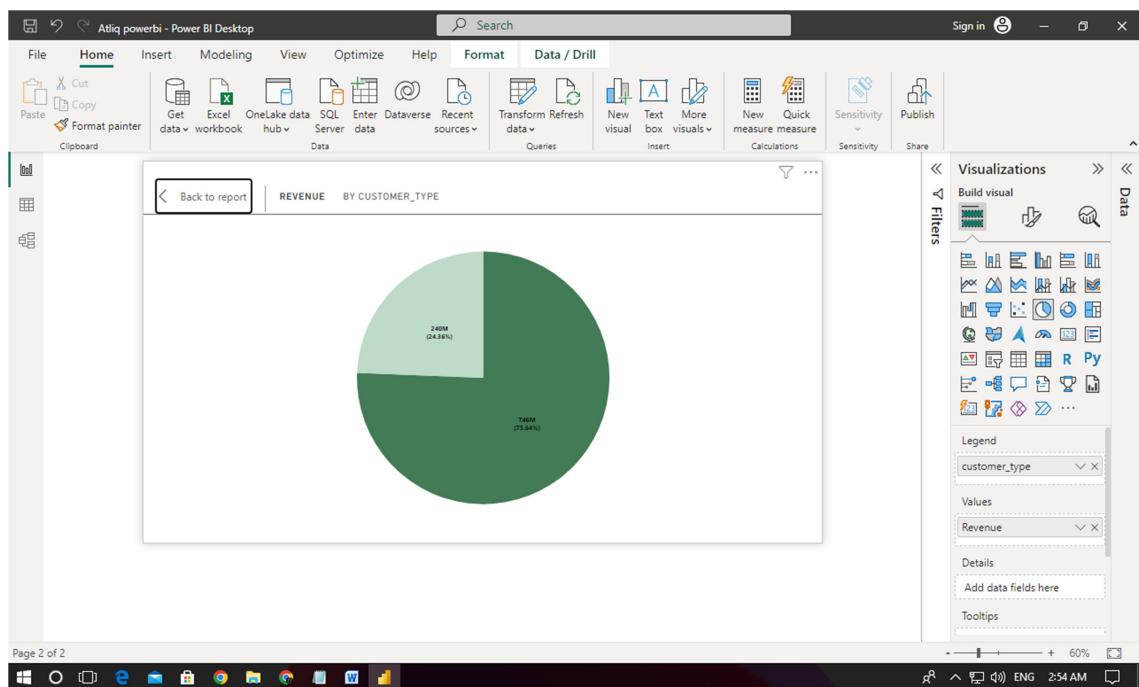
**Year Slicer:-** This visualization shows the years in the form of button with the help of slicing tool in Power BI and we can see the data according to the years by just simply clicking on it.



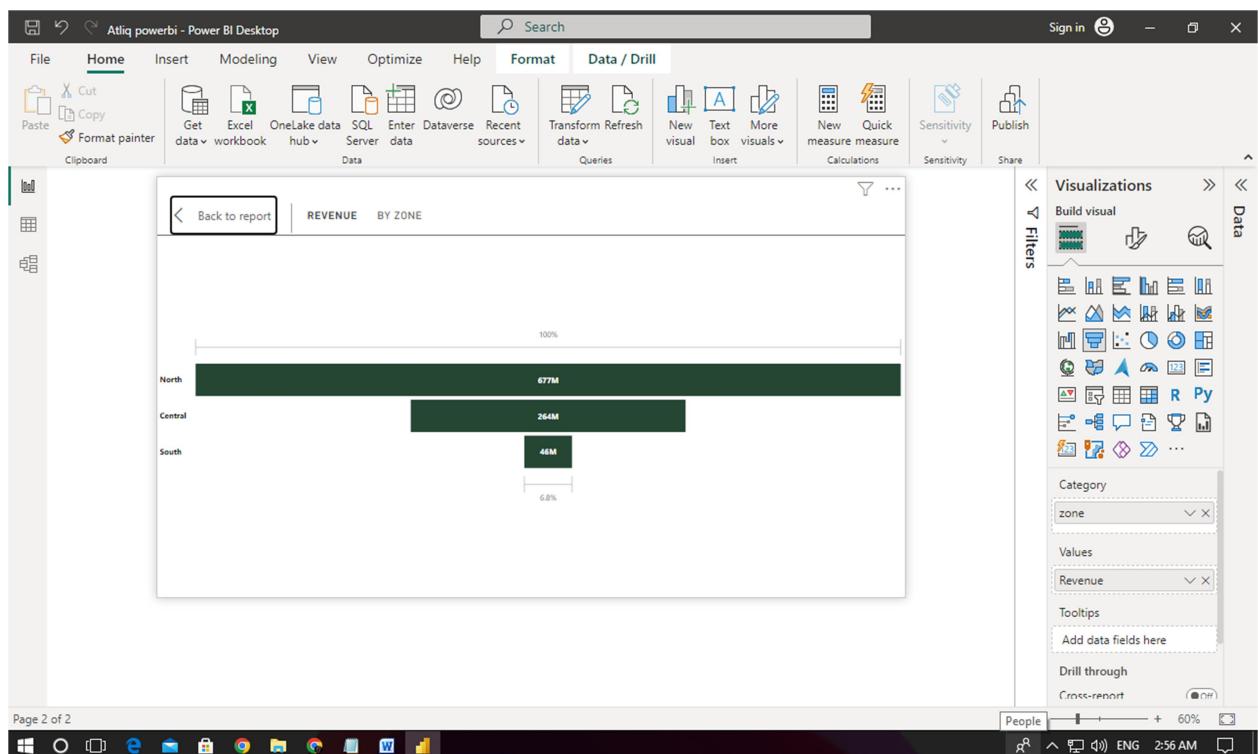
**Revenue by Time series:-** This line chart shows how the year wise sales of the organization where we can easily notice that there is an exponential growth can be seen in covid-19 period and also it can be observed that there is rapid decline in the sales revenue line in post covid period.



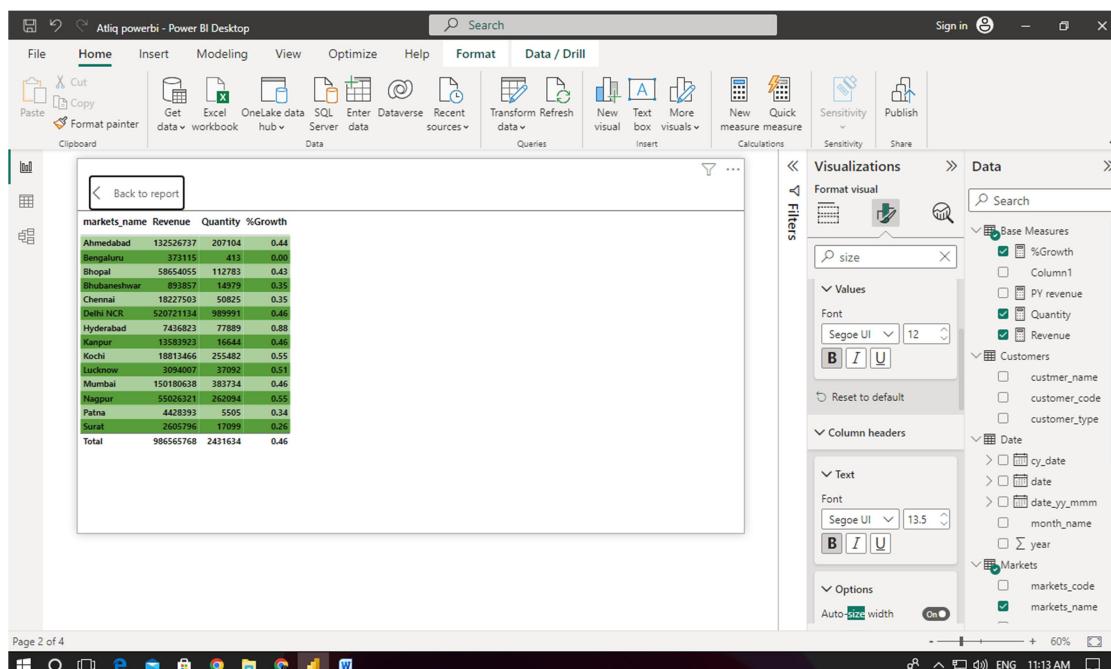
**Customers by Quantity:-** This chart shows the Top 5 customers based on quantity of the products sales throughout the year. The customers which has the maximum purchases from AtliQ is Electrical stores done 65.4k purchases.



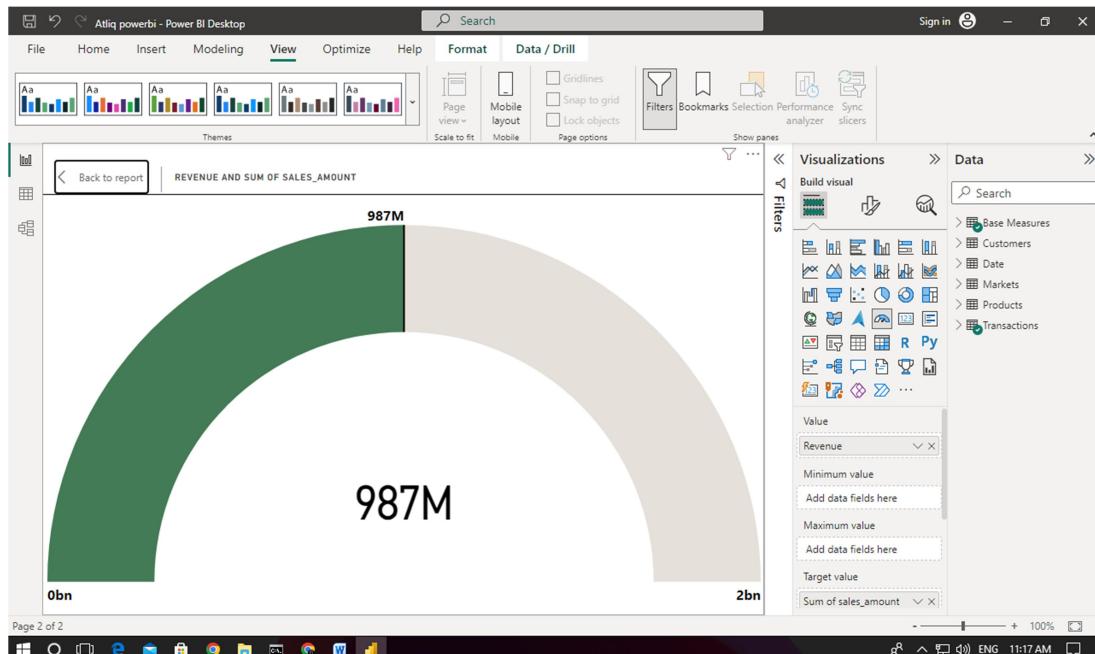
**Revenue by Customer Type:-** This pie chart shows the Revenue based on the Customer type whether its from the E-Commerce and the distribution Bricks and Motors. The E-Commerce has 24.36% revenue by sales and Bricks and Motors are having 75.64% of sales revenue.



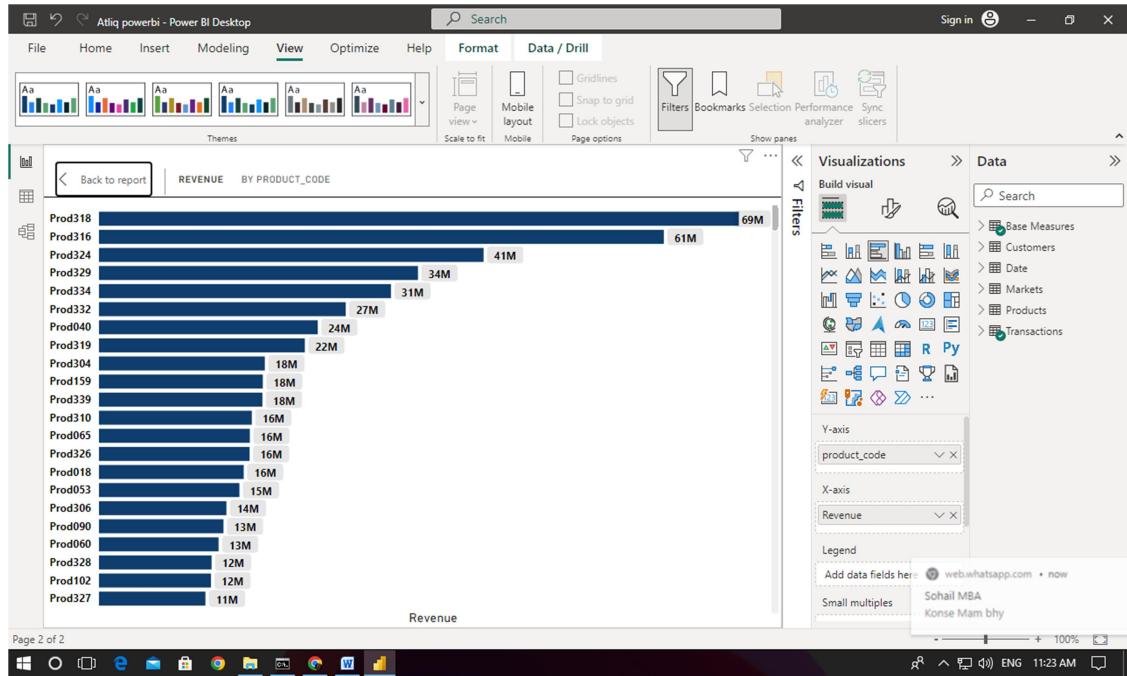
**Revenue by zones:-** The Funnel analysis shows that the North zone having the highest revenue compared to the other zones. It having 677M whereas central having 254M and south zone having 47M of revenue.



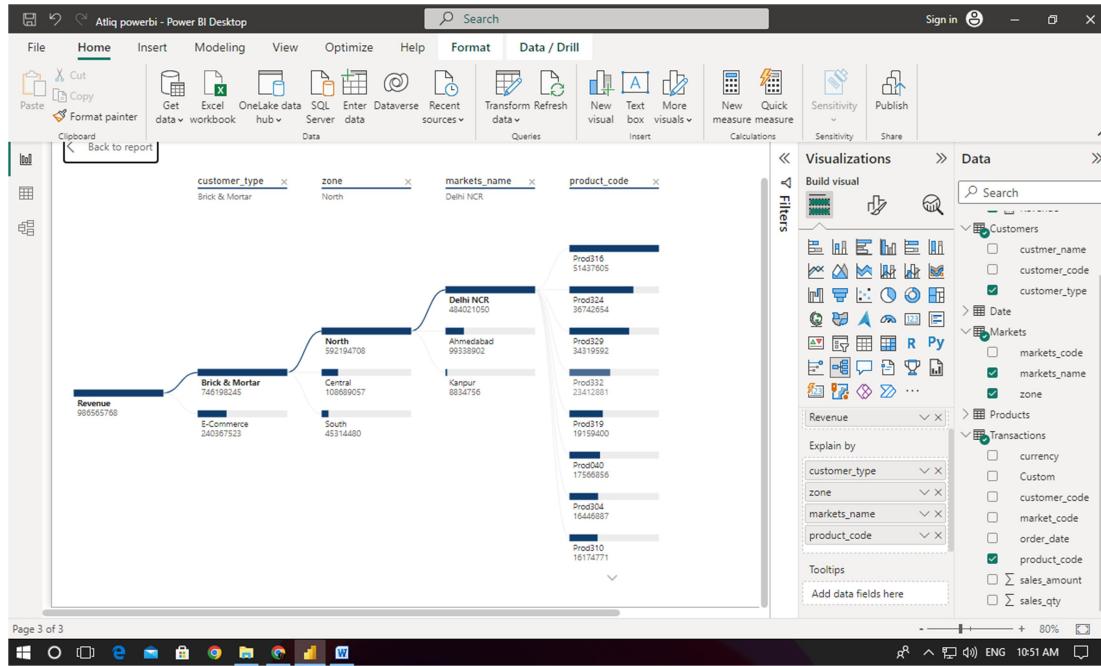
**Markets along with Revenue and Sales Quantity:-** The table contains markets with the revenue and sales Qty column which basically shows the total sales revenue 987M and sales quantity 2M.



**Gauge chart analysis:-** This chart shows the target we achieved and moving towards the new goals and new targets as our business grows up to 987M so now we are in the middle of the new target which is 2Bn basically it shows the measures the success rate of the organization.

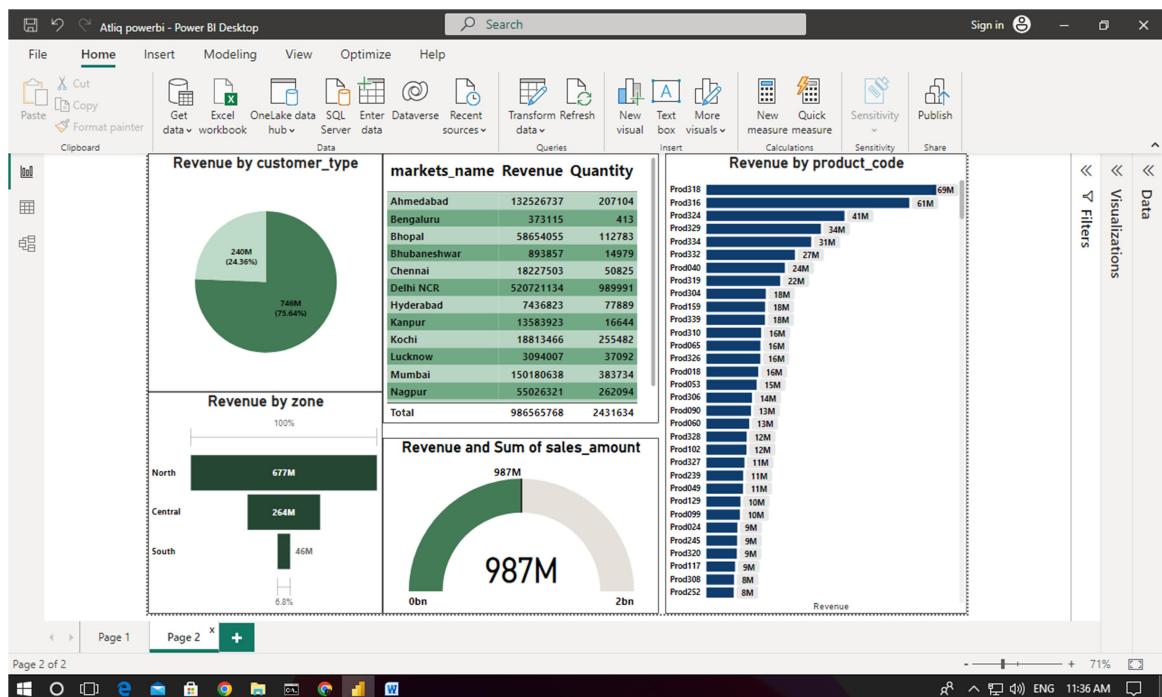
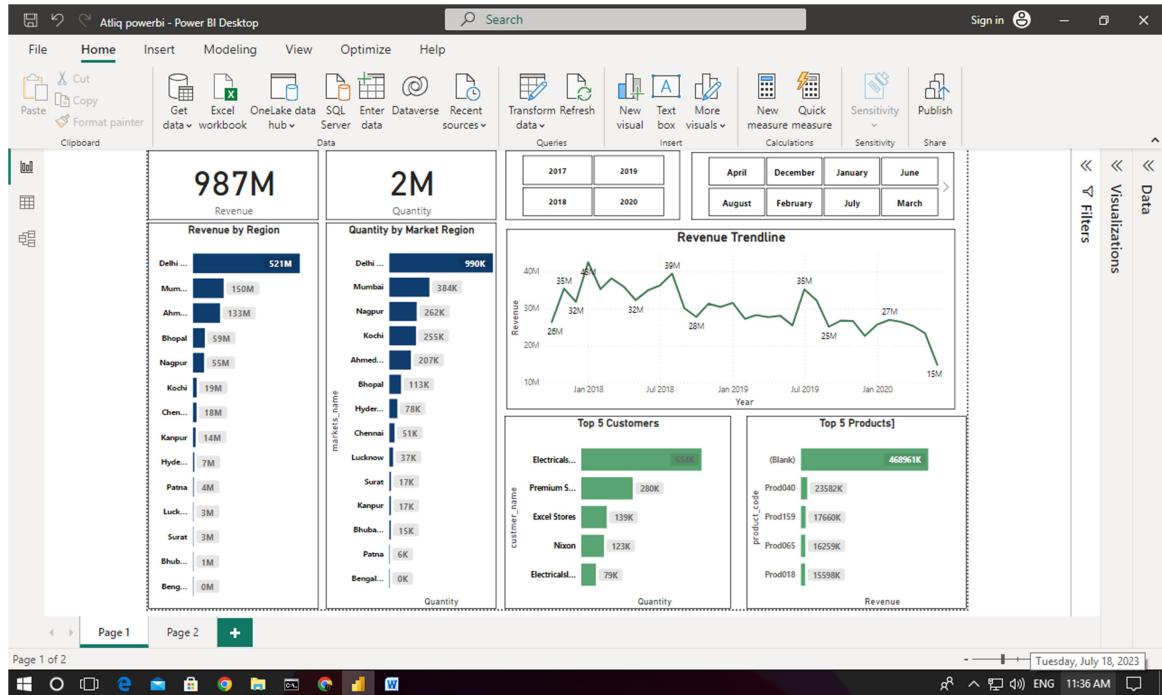


**Revenue by Product:-** This chart shows the product name by code and show how much revenue earned by the each individual product in the market. Prod318 has 69M of sales revenue which is the highest selling product in the market. The products which having no sales or minimum sales revenue are the prod111, prod115 and prod181 so on.....



**Decomposition Tree Analysis:-** This analysis shows the relationship of every step of sales cycle including all types of channels, zones and market regions along with the revenue prospectus. It also shows the total revenue earned in breakups.

# OUR DASHBOARDS



## **CHAPTER-V**

### **FINDINGS, SUGGESTIONS AND CONCLUSION**

## **FINDINGS:**

- AtliQ acquires the highest sales revenue and sales Quantity in Delhi market.
- Sales of pre-covid were pretty much good but in the period of covid there is a lot of fluctuations in it. Sales of post-Covid have the decline in the sales revenue.
- An electrical Sara store is the client who purchases more than 65k in sales Quantity.
- Most of the revenue generated from Bricks and Motors which is a distributing channel and the remaining sales revenue generated by E-Commerce websites.
- AtliQ captured the north zone of India and has the highest revenue from that.
- 1 Jan 2018 is the peak sales trend where the maximum sales happened.
- XYZ product leads the market and having the sales in maximum number

## **SUGGESTIONS:**

- AtliQ has to improve the sales in Surat by doing effective market research and by offering cost effective products to the customers.
- As it can be observed clearly that post-Covid sales had a lot of impact of the sales revenue of the company. So AtliQ should have to take some strategies decisions to tackle the sales decline.
- South zone is having less sales revenue compare to the north and central zone.
- AtliQ has to improve the online market as we all knows that online market has worldwide customers. So if it focuses on the online market it may have better opportunities In future.
- It should have to more conscious on some market regions such as Surat etc. By doing good marketing of the products and services.

## **CONCLUSION:**

The study concludes that AtliQ has performed well in national market as it grew revenue from 94M to 987M within 4 years. Delhi was the main the market region of their sales of product and services. During the Covid phase the sales was decreased. By doing marketing campaigns and content marketing the products can be reached to the customer as soon as possible. The study reveals that AtliQ performs very well in both north and central zones of India and they should have to concentrate on the southern region of India as to increase the sales revenue. Interactive dashboards helps to identify the hidden patterns of the data also provides the meaningful insights from the data which helps to take the strategic decisions in the organization. They just need to open the doors of the new states so that their product can reached the maximum number of customers in India and if they focus on online market then they may also have the customers from international market.

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