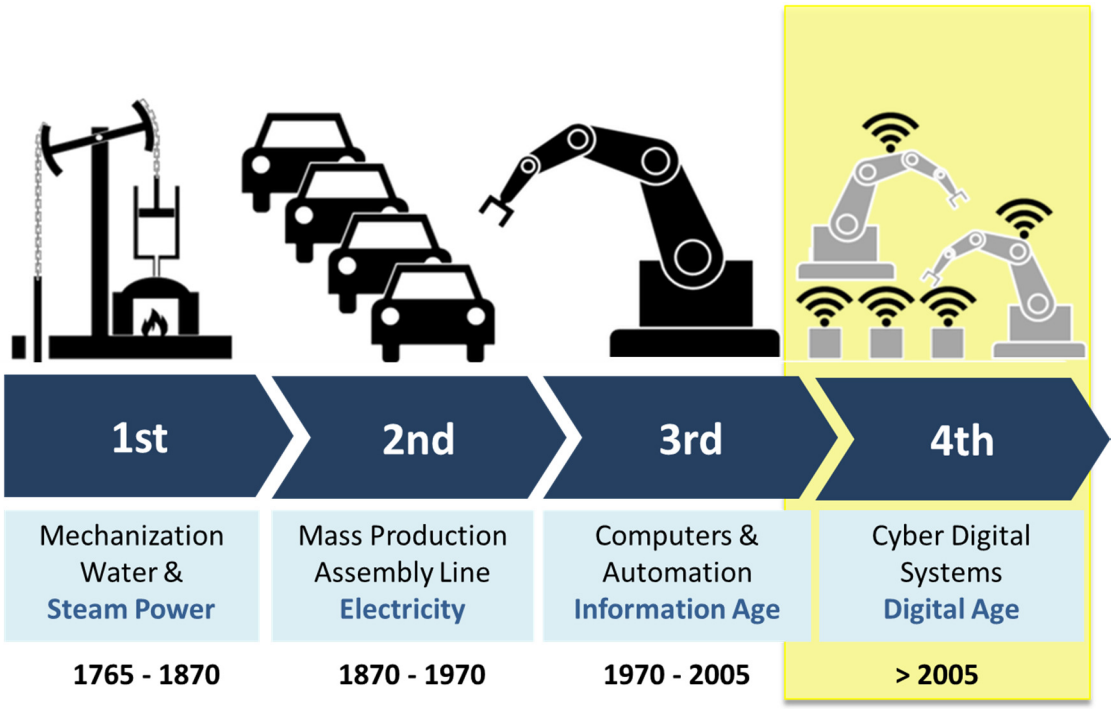
Overview of Data Science

What is Data Science?
Why is it Important?
How Will Data Science Help You?

KAALP CONSULTING
Inspiring Leadership

Useful Information on Data Science

We are in the era of Industry 4.0 or Digital Age



Thanks to the digital economy we live in a **VUCA** world. A world of:

V Volatility

U Uncertainty

C Complexity and

A Ambiguity

To succeed in the VUCA world, it is critical to take **informed decisions.**

Why is Analytics important?

Business or Data Analytics is required to extract insights form information and thereby improve the quality of decision making. As engineers and managers, regardless of the function you are involved in, the ability to take informed decisions will be an essential skill to possess.

Data, Information and Insights

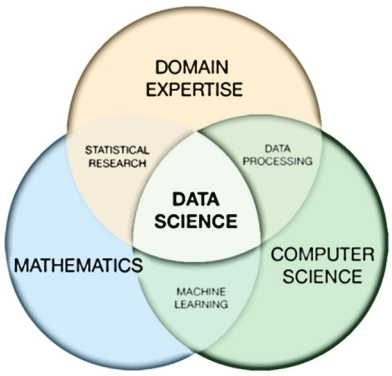
Data — Data is raw, unorganized facts

Information — Organized and processed data in a given context is Information.
Extracts meaning from Data

Insights — Ability to draw conclusions from information is Insight.
Trends, Patterns, Relationships

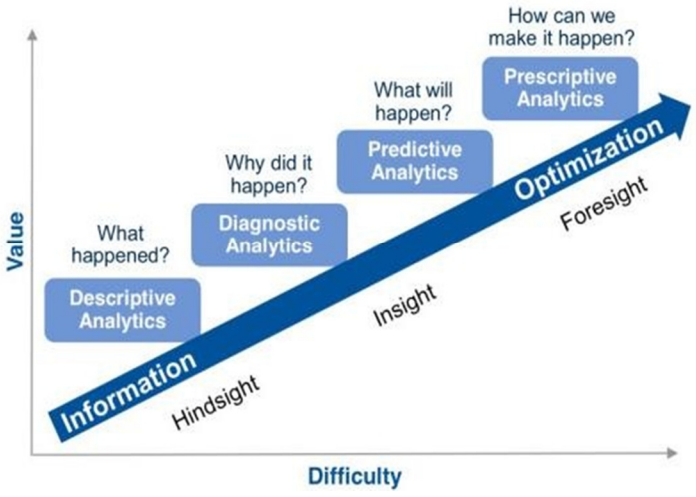
What is Data Science?

Data Science is a newly emerging field of science, combining **statistics & mathematics, programming,** and **business knowledge** to extract **meaningful insights** from raw data. Insights are required to support better **decision making.** Often *trends* and *hidden patterns* (insights) are revealed through deeper analysis of data, using **software tools, models, charts and machine learning.**



Analytics helps in knowing:

- **What happened?**
- **Why did it happen?**
- **What will happen?**
- **How can we make it happen**



`Common Terminology in Data Science.

Data Science may be classified as the umbrella body of knowledge which comprises of various fields such as business intelligence, business analytics, data analytics, big data etc.

Data Science

Business Intelligence

Collection, integration, analysis and presentation of information for

Problem solving and better decision making

Business Analytics

Statistical analysis, data mining and predictive modelling to identify trends and get insights to

Drive business change

Business Intelligence is needed to run the business

while

Business Analytics is needed to change the business.

Big Data

Is a field that extracts and analyses information from data sets that are too large or complex to be dealt with by traditional data-processing applications

How will knowledge of analytics help you?

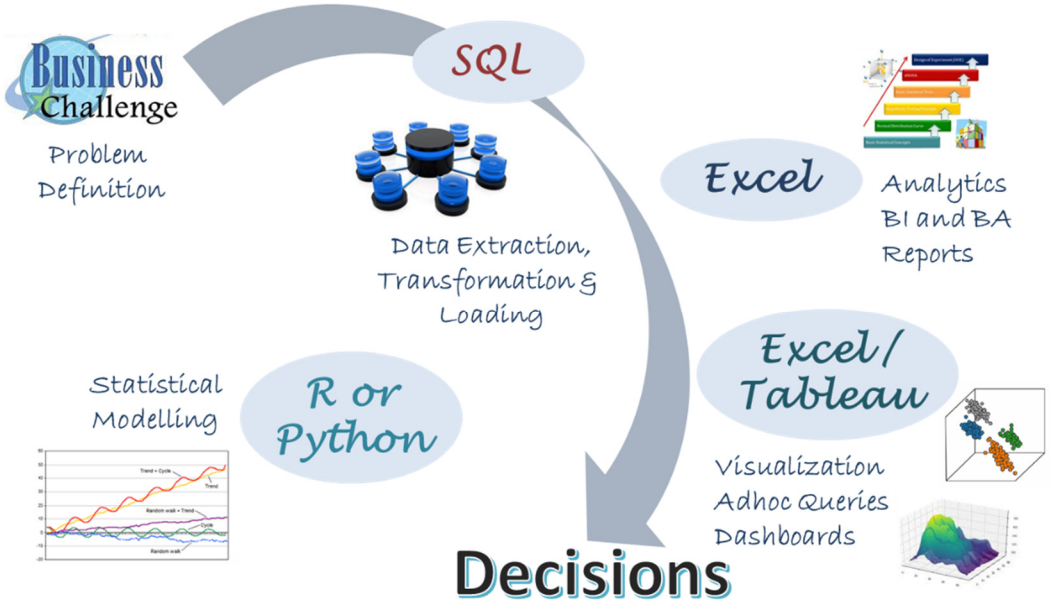
The skills you acquire in analytics will not only help you in professional life but also in personal life. In industry:

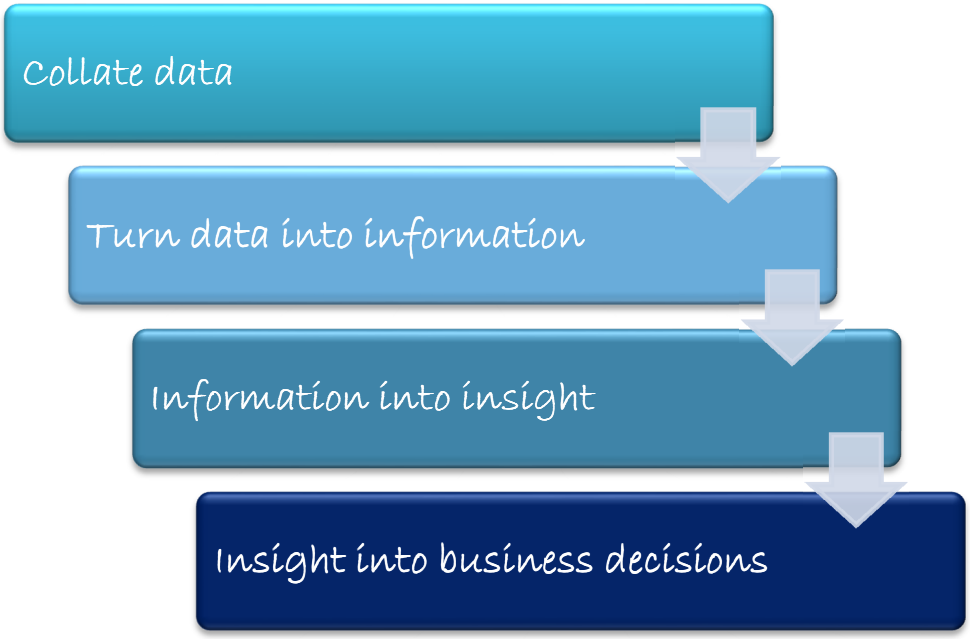
- Help you explore more job opportunities and get better and higher paying jobs
- Knowledge of analytics is and will be the **new norm.** That is, organisations will expect their technical and management staff to have requisite data analytic skills, like in today's scenario, it is *mandatory* for all professionals to have knowledge of office tools like Word, Excel etc.
- The ability to effectively analyse data and take better decisions will help you to advance in your career faster.
- Knowledge of Analytics will help you regardless of the functional you will be involved in.

Business Analytics – The New Normal

What will I learn?

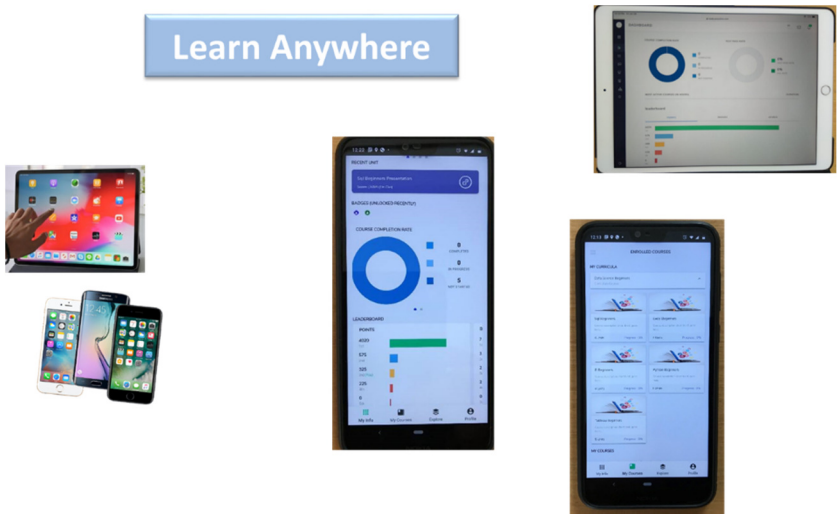
You will gain a good understanding of how analytics is applied in developing real life business solutions. Our course will help students to acquire the knowledge of applying analytics right form defining the business challenge to decision making, using the tools that are covered in our curriculum.



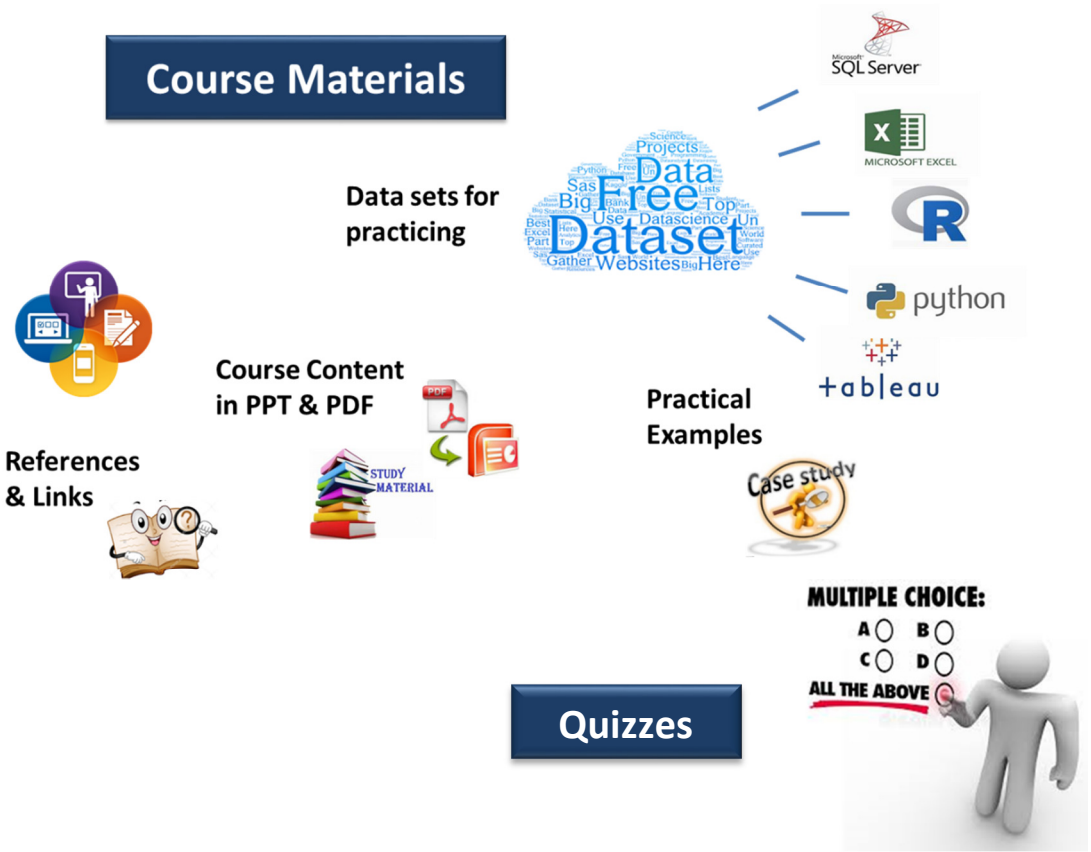


How will I learn?

The courses are online, so you can learn at your **own pace** and **convenience 24/7**. The course content is accessible form multiple devices.



Comprehensive course materials.



Effective Learning

Our courses are designed for an **experiential learning experience** so that you are better prepared for **job placements.** The course duration is roughly 80 hours. You will be expected to go through the course content online using the interactive course material, supporting content and practice datasets. If you have any queries you can post it online and you will get responses from our instructors within 24 hours. After every 3 weeks **industry specialists** will conduct **workshops** to clear any further doubts you have and take you through the case studies and application of analytics in industry.

Hands-on training For better learning and confidence building

Assignments

Assignment based learning to improve: problem solving skills, innovative thinking and collaborative working.

Case Studies

To understand how Data Science is applied in industries such as Automotive, Retail, Pharma, Telecom and Banking

Experience Sharing

Practising Data Science professional share their thoughts and experience

- Designed by professionals with rich experience in DS

- Industry Relevant

- Facilitators have both industry and teaching experience
- Equip students for better jobs

Case Studies on Application of Analytics

The course will include case studies in sectors such as **Retail, Automotive and Telecom.** The case studies will give you a good practical understanding of how basic data is analysed to get meaningful information on business performance for strategic business decisions

Key Challenges in Retail

- Improving customer conversion rates
- Personalizing marketing campaign
- Avoiding customer churn
- Lowering customer acquisition costs.

Analytics Can Provide New Insights

- Recognizing high value customers
- Motives behind their purchase
- Buying patterns behaviours
- Best channels to market to them and when

Segmentation

Segmenting customers significantly improves marketing performance

Makes campaigns more relevant to more customers

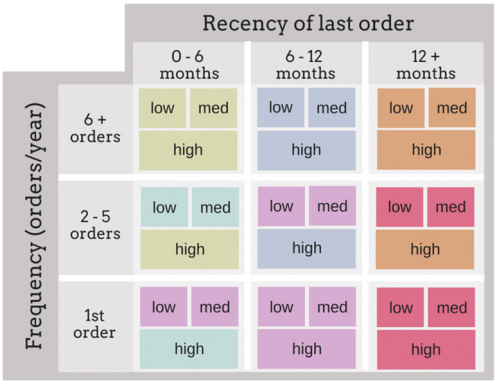
Increases response rates and sales.

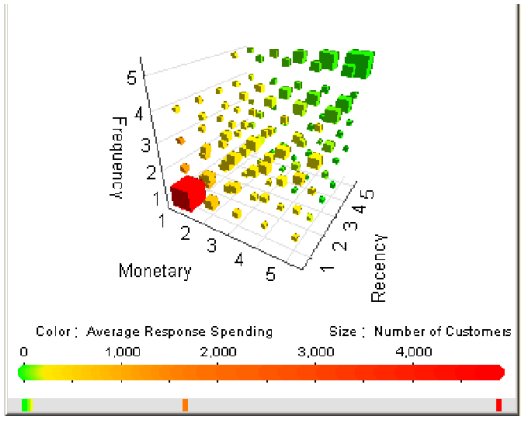
RFM Analysis is a Segmentation Tool

Recency (R) - Time since last purchase

Frequency (F) - Total number of purchases

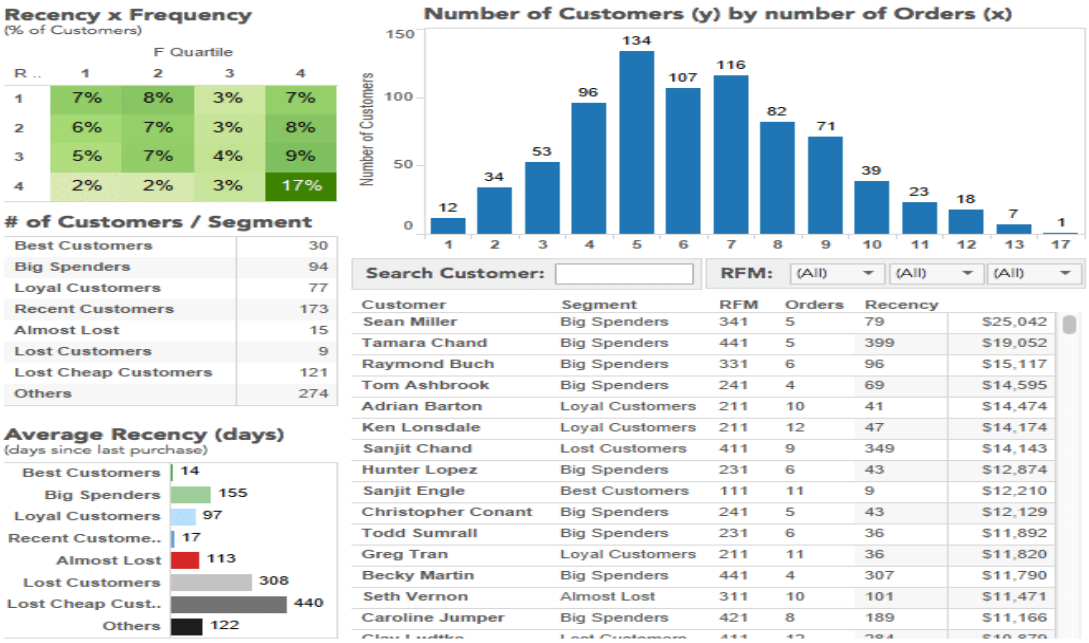
Monetary Value (M) - Total monetary value





RFM Analysis

Illustrative Charts



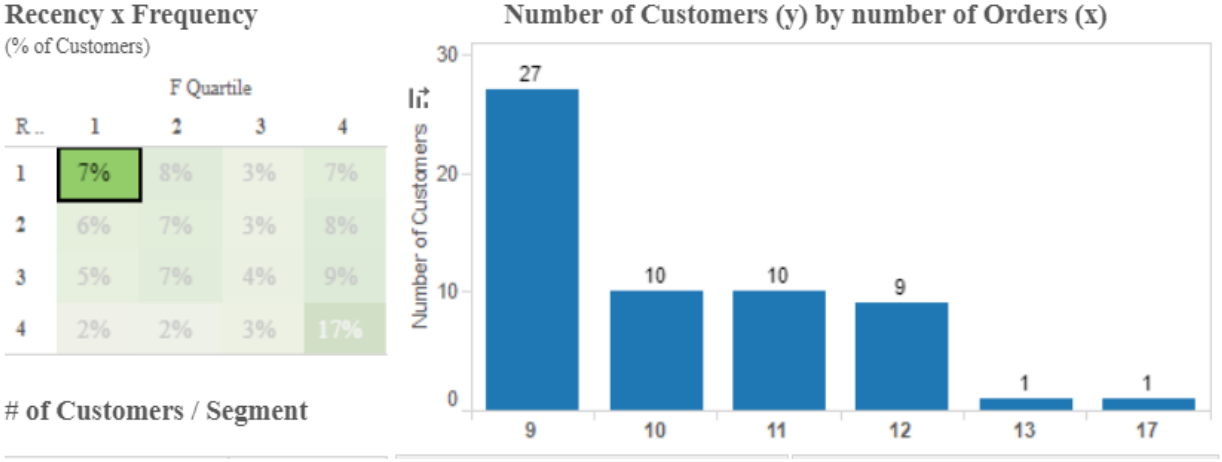
of Customers / Segment

Best Customers	30
Big Spenders	94
Loyal Customers	77
Recent Customers	173
Almost Lost	15
Lost Customers	9
Lost Cheap Customers	121
Others	274

Recency x Frequency

(% of Customers)

R ..	F Quartile 1	2	3	4
1	7%	8%	3%	7%
2	6%	7%	3%	8%
3	5%	7%	4%	9%
4	2%	2%	3%	17%



Key Takeaways from this Course

- Good understanding of the core concepts of Analytics
- Ability to extract insights by using data from multiple sources
- Knowledge of descriptive, diagnostic and predictive analytics and statistical modeling tools
- Techniques for preparing powerful reports and dashboards
- Applicability of these Tools in problem solving and decision making

For further information visit our website **www.kaalp.com.**

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