



Data Science

Explore Series



What to expect

PRESENTATION FLOW

What is data science

The life cycle

Tools in data science

Data Storytelling

Application

Successful data scientist



What is data science

WHAT WE DO

Its a field that blends tools,algorithms and machine learning principles with the aim of discovering patterns from raw data

A data scientist's role combines computer science, statistics, and mathematics.





Why data science?

BIG DATA

data that is so large, fast or complex that it's difficult or impossible to process using traditional methods. Big data is only important based on what you do with it

UNSTRUCTURED DATA

This is information that is not organized in a predefined manner. 90% of the data is unstructured.

PREDICTIVE ANALYSIS

Creating models to detect an activity or an action

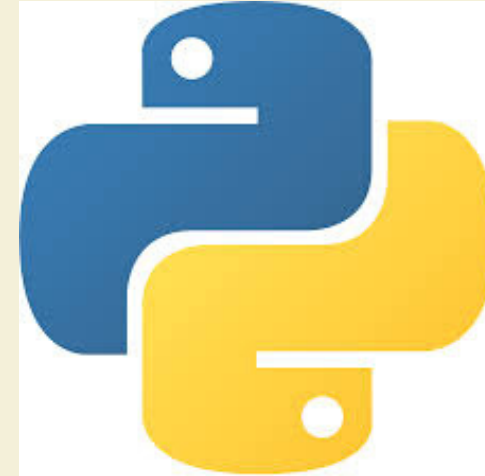
WISE WORDS

"You can have data without information, but you cannot have information without data."

—DANIEL KEYS MORAN



Tools used



This tools makes it easier for a data scientist to interact with data

Scientific Method

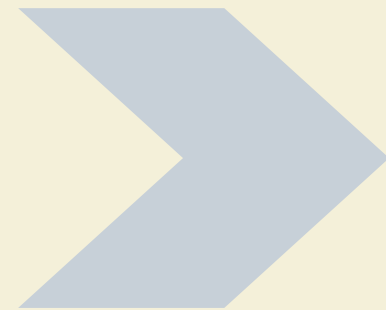
The scientific method is a method of acquiring knowledge through formulating hypotheses based on observations, testing these through experiments and acting on them based on the knowledge acquired; rejecting, refining or accepting the hypothesis.



Cycle

it describes the typical phases of a project, the tasks involved with each phase, and an explanation of the relationships between these tasks.

**Business
Understanding**



**Data
Understanding**



**Data
Preparation**



Modelling



Evaluation



Deployment

CRISP-DM, which stands for Cross-Industry Standard Process for Data Mining, is an industry-proven way to guide your data mining efforts.



State problem and collect data


The initial spark that starts a data science project is a question or objective. What would you like to know? Why would you like to know it? This could be called the business requirement or the hypothesis.



State problem and collect data

Interviews, surveys, sensing...Use secondary data from other sources like documents, records, websites, social media...The data you obtain may be limited by:
Expertise and skill in data collection and acquisition (you have major influence on this.)The resources and tools available (Cost)Ethics of data acquisition(respecting confidentiality and privacy. Data privacy laws.)

DATA PREPARATION



EXPLORATORY DATA ANALYSIS

PLAN/MODEL



MODEL BUILDING

COMMUNICATE

DEPLOYMENT



Data Storytelling

Why is it so important to tell a story?

- To drive decisions made within the organization. With a good story, you are in a position to persuade and instill trust among the stakeholders.
- It is a brief way to share findings collected in a brief way despite the process being tedious.

What happens if you do not deliver on this: Likelihood of losing your job. Colleagues and stakeholders shall lose faith your potential since they can not see the value

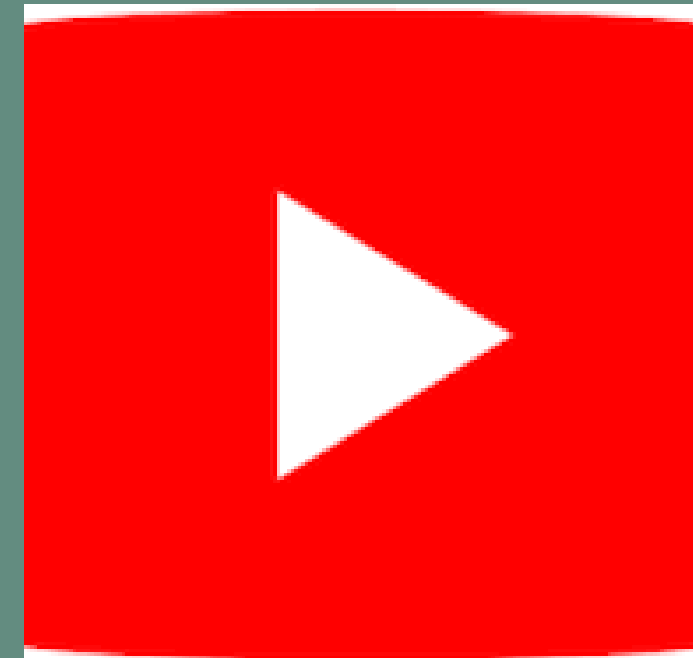
Application of Data Science

Ecommerce platforms

Recommender systems are algorithms aimed to suggest relevant items to users.

It has changed today's marketing strategies

35% of Amazon.com's revenue is generated by its recommendation engine.

The Amazon logo, featuring the word "amazon" in a bold, black, sans-serif font, with a curved orange arrow underneath it pointing from the letter 'a' to the letter 'z'.

Application of Data Science

Credit Card Fraud Detection

It entails cloning of a customer ie using their cards and details to make unauthorized transactions.

Rule based Systems - Model based systems



Goals

ALWAYS GET CURIOUS WITH DATA AND
HAVE THE WILLINGNESS TO LEARN

It gives you the enthusiasm to dive into any data
besides not having the knowledge

BUILD ON YOUR COMMUNICATION

Poor communication will not make any changes

LEARN ON NEW TRENDS

Make a conscious effort to get familiar with emerging
trends and apply them to career goal

PATIENCE AND GRIT

When its gets tough the need not to loose hope



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**THANK
YOU**

Questions??