

Welcome to the Data Universe!

Your 6-Day Journey into Data Analytics & Visualization



Data is Everywhere. You Use It Every Day.

Every time you engage with a digital service, you're interacting with data. From real-time scores in cricket to personalized recommendations on your favorite apps, data is silently guiding your experience. Learning data analytics empowers you to understand, and even build, these intelligent systems.



Cricket

How does a team decide the batting order? (Performance data)



Food Delivery

How does Zomato predict delivery time? (Location & traffic data)



Shopping

How does Amazon recommend what you should buy next? (Purchase history data)



Entertainment

How does Netflix know which movie you'll love? (Viewing habits data)



It's Like Being a Data Detective

Data Analytics is the process of transforming raw information into actionable insights. It involves a systematic approach to uncover hidden stories within data.



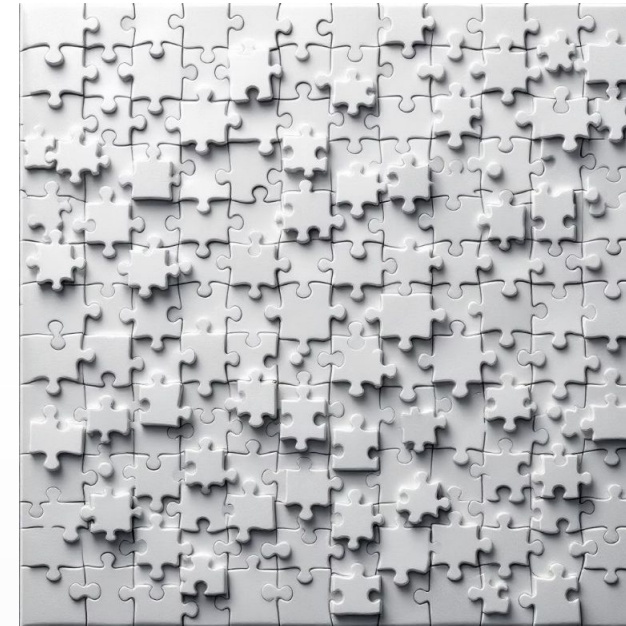
1. Asking the Right Questions:

"Which products sell best in which city?" This is where your investigation begins, defining the mystery to solve.



2. Gathering and Cleaning Clues:

Finding the right data, which often comes messy and incomplete, and preparing it for analysis, much like a detective sifting through evidence.



3. Finding Patterns & Insights:

Connecting the dots, discovering trends, anomalies, and relationships that were previously hidden. This is where the story starts to emerge.



4. Telling That Story:

Communicating your findings through compelling visualizations, dashboards, and narratives that make complex insights easy to understand and act upon.



The Professional Workflow We Will Follow

This workshop is structured to mimic the real-world data analytics lifecycle, preparing you for professional roles.



Collect & Clean

Gather raw, messy data and make it usable.

Workshop Focus: Day 1



Explore & Visualize

Create charts to understand patterns and outliers.

Workshop Focus: Day 2 & 3



Analyze & Model

Apply statistics and machine learning to predict outcomes.

Workshop Focus: Day 4 & 5



Communicate & Deploy

Build dashboards and present your findings.

Workshop Focus: Day 6 & Beyond



Our Journey for the Week

This 6-day expedition is designed to progressively build your data analytics skills, from foundational concepts to advanced applications.



Day 1: Mastering the Mess

Learn **Pandas** to load, clean, and wrangle any dataset. The most essential skill!



Day 2: Telling Stories with Charts

Scrape data from the web and create your first insightful visualizations with **Seaborn**.



Day 3: Bringing Data to Life

Move from static plots to beautiful, **interactive charts** with Plotly and analyze data over time.



Day 4: Dashboards & Networks

Build professional **BI Dashboards** and analyze relationships with **Network Graphs**.



Day 5: Predicting the Future

Dive into **Machine Learning** to build models that can classify and predict.



Day 6: Become the Expert!

Apply all your skills in a **Capstone Project** on a topic you love (NLP, CV, or G AI).



Garbage In, Garbage Out. Today, We Learn to Clean the Garbage.

Data cleaning is the cornerstone of effective data analytics. Today, we'll tackle the critical process of transforming raw, often messy, data into a clean, usable format.



Pre-Lunch:

- Meet Pandas: Your new best friend for data manipulation.
- Load data from any source (CSV, Excel).
- Select, slice, and dice your data.

Post-Lunch:

- The real world: Handling missing values (NaN).
- Taming outliers (extreme values).
- Fixing messy text and incorrect dates.

Hands-On: We'll take a messy attendance sheet and turn it into a perfectly clean, analysis-ready dataset.

The Career Paths You Unlock This Week

The skills you acquire in this workshop are highly sought after and open doors to various high-growth careers in India's booming tech and data sectors.



Data Analyst

Finds insights to help businesses make better decisions.

(Hired by: TCS, Infosys, Flipkart)



BI Developer

Builds dashboards and reports for managers. (Hired by: ZS

Associates, Accenture, L&T)



Data Scientist

Builds predictive models and algorithms. (Hired by: Swiggy,

Zerodha, FAANG companies)



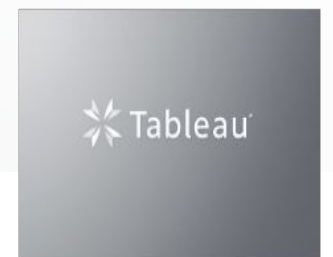
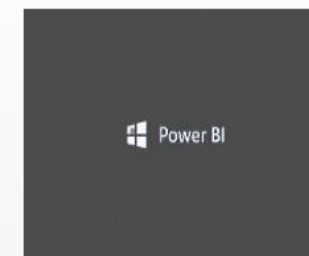
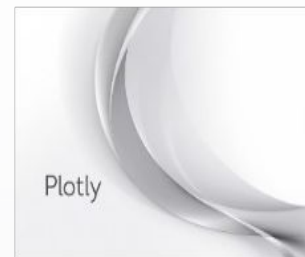
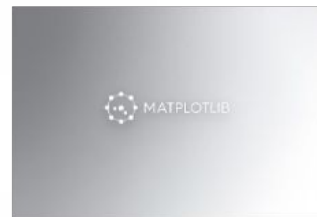
And Many More...

Including Product Analyst, ML Engineer, Quant Analyst, and other specialized roles.



The Tools of the Modern Data Professional

Gain hands-on experience with the industry-standard tools that data professionals use daily, making you immediately valuable.



We Will Go From This... To This.

Witness the remarkable transformation from raw, unreadable data to compelling, interactive insights.

Before:

A wall of text and numbers in a raw CSV file, difficult to interpret and derive meaning from.

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After:

A clear, interactive story that provides answers at a glance, allowing for dynamic exploration and understanding.



Let's Start!

Theory is essential, but practical application is where true learning happens. Let's ensure our environments are ready to kickstart our data journey.

1 Anaconda Installed?

Ensure your Python distribution with essential data science libraries is ready.

2 Jupyter Notebook Running?

Our interactive coding environment, your canvas for data exploration.

3 Curiosity Activated?

The most crucial tool of all – your eagerness to discover and create!

First Task: Let's open our first Jupyter Notebook and load a dataset. It's time to write some code!

