



Institute of
Business Administration
Karachi

Leadership and Ideas for Tomorrow



Center for Information & Communication Technology

Data-Driven Storytelling and Visualization

Certification Program



Centre for Information &
Communication Technologies

Data-Driven Storytelling and Visualization

Data visualization is a critical skill in today's data-driven world, allowing professionals to translate complex datasets into clear, actionable insights. This course will provide hands-on experience with leading data visualization tools, guiding participants through the entire process, from understanding raw data to presenting polished, impactful visual reports.

Course Fee: Rs. 85,000/- (+5% SST)

Duration: 50 hours

Days: Saturdays only

Commencing: January 2025

Timings: 2 PM - 6 PM

Outcome of the Training:

After completing this course, participants will:

- **Master Data Visualization Tools:** Participants will be proficient in using Excel, Tableau, Power BI, and Python to visualize data.
- **Create Impactful Visualizations:** Be able to design dashboards and reports that communicate complex data clearly and effectively.
- **Improve Decision-Making:** Use data-driven insights to support business decisions in real time.
- **Cross-Departmental Impact:** Participants can apply these skills across various industries, from marketing to finance, operations, and HR.
- **Improves Communication:** Data visualizations allow professionals to communicate complex information quickly and effectively.
- **Transform Insights into Persuasive Storytelling:** Use storytelling to guide viewers through data insights, creating a lasting impact by connecting facts with purpose.

Where to Implement:

Data visualization skills can be applied widely to transform complex data into clear, actionable insights, supporting effective decision-making and strategic planning. This course empowers participants to create compelling data narratives that highlight trends, forecast outcomes, and reveal hidden opportunities—enabling impactful storytelling that drives informed choices and optimizes business performance across various functions.

Benefits to Participants:

- **Enhanced Problem-Solving Abilities** Equip yourself to analyze complex datasets and address data-driven challenges, essential for data-backed decision-making.
- **Data-Driven Storytelling for Persuasive Communication** Learn to craft compelling data narratives, which are crucial for roles needing stakeholder buy-in, like marketing and management.
- **Increased Value in Cross-Functional Teams** Bridge the gap between data analysts and business leaders, making you a valuable team asset for actionable insights.
- **Portfolio-Building for Professional Growth** Complete a capstone project to showcase your skills in transforming raw data into actionable dashboards.
- **Data visualization skills** are in high demand, and mastering them will open doors to more advanced roles, such as data analyst or business intelligence (BI) specialist.
- Participants will be able to present data in a way that supports better decision-making in their departments.
- **Real-World Relevance:** The course focuses on real-life business applications, ensuring participants can immediately apply their skills to their jobs.

Who should apply?

- Decision-Makers
- Project Leads
- Department Heads
- Business Strategists
- Operations Supervisors
- Data Analysts & Enthusiasts
- Customer Insights Specialists
- Business Consultants

Course Structure:

S no.	Module	Topics
1	Introduction to Data Visualization	Objective: Build a foundation in data visualization principles.
		Topics: <ul style="list-style-type: none"> • The importance of data visualization in modern business. • Fundamentals of visual perception: Why visual data is impactful. • Types of visualizations: Charts, graphs, maps, and dashboards. • Overview of data types and appropriate visualizations. • Real-life example: How a company used visualization to streamline operations.
		Outcome: Participants will understand the basic principles and tools of data visualization, setting the stage for hands-on learning.
2	Data Cleaning and Preparation	Objective: Learn how to prepare raw data for effective visualization.
		Topics: <ul style="list-style-type: none"> • Understanding data types (structured, unstructured) and formats (CSV, Excel, JSON). • Data cleaning: Handling missing data, outliers, and inconsistencies. • Using Excel/Google Sheets and Power Query for data wrangling. • Practical application: Cleaning and preparing a dataset from a real-world project.
		Outcome: Participants will gain skills in preparing datasets for visualization, an essential step in the visualization process.

Course Structure:

S no.	Module	Topics
3	Tools for Data Visualization	Objective: Introduce popular data visualization tools and provide practical, hands-on experience.
		Tools Covered: <ul style="list-style-type: none"> • Excel/Google Sheets: Basics of data visualization. • Tableau: Building interactive dashboards. • Power BI: Creating data models and custom visuals. • Python (Matplotlib, Seaborn): For more technical participants interested in coding Hands-on: <ul style="list-style-type: none"> • Creating visualizations with Excel and Google Sheets. • Building interactive dashboards using Tableau and Power BI.
		<ul style="list-style-type: none"> • Outcome: Participants will become proficient in using various data visualization tools.
4	Storytelling KPIs	Objective: Develop advanced skills to create meaningful and sophisticated visualizations.
		Topics: <ul style="list-style-type: none"> • Storytelling with data: How to communicate insights effectively. • Designing dashboards for business use: KPIs, drill-down analysis, and real-time data. • Customizing visualizations for impact (color, layout, typography). • Integrating data from multiple sources (databases, APIs). • Case study: Visualizing financial data for reporting. Hands-on: Building a real-time sales dashboard using Power BI/Tableau, integrating various data sources.
		<ul style="list-style-type: none"> • Outcome: Participants will be able to build professional, complex dashboards for decision-making.

Data Visualization

Course Structure:

S no.	Module	Topics
5	Real-Life Applications of Data Visualization	Objective: Apply visualization techniques to real-world business problems.
		Tools Covered: <ul style="list-style-type: none"> • Use cases in marketing, finance, HR, and operations. • Visualizing customer behavior and sales trends. • Presenting financial performance and forecasts. • HR metrics: Employee performance and workforce analytics. • Real-world case studies from multiple industries.
		<ul style="list-style-type: none"> • Outcome: Participants will be able to build professional, complex dashboards for decision-making.
6	Final Capstone Project	Objective: Apply all learned concepts in a comprehensive project.
		Project: <ul style="list-style-type: none"> • Participants will choose a dataset relevant to their industry (e.g., sales data, financial reports, marketing performance). • They will clean, prepare, and visualize the data using Tableau/Power BI. • The final presentation will include insights and actionable recommendations
		<ul style="list-style-type: none"> • Outcome: Participants will complete a full-fledged data visualization project, showcasing their skills and providing a tangible asset for their professional portfolio.

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