

Mega E-Conclave

Age of Data Analytics

30th May 2020

Understanding the Data Analytics Framework

01

Frame the Problem

- Domain Knowledge (needs)
- Product Intuition (metrics)
- Business Strategy (priorities)
- Teamwork (people and resources)

02

Collect Raw Data

- Database Management
- Querying Structured databases
 - SQL
- Retrieving Unstructured info
- Distributed storage
 - Hadoop

03

Process the Data

- Scripting language
 - Python or R
- Data Cleaning
- Distributed processing

04

Explore the Data

- Scientific computing
- Inferential Statistics
- Experimental Design

05

Perform in-depth Analysis

- Machine Learning
- ML Tools Library
- Advanced Math

06

Communicate Results

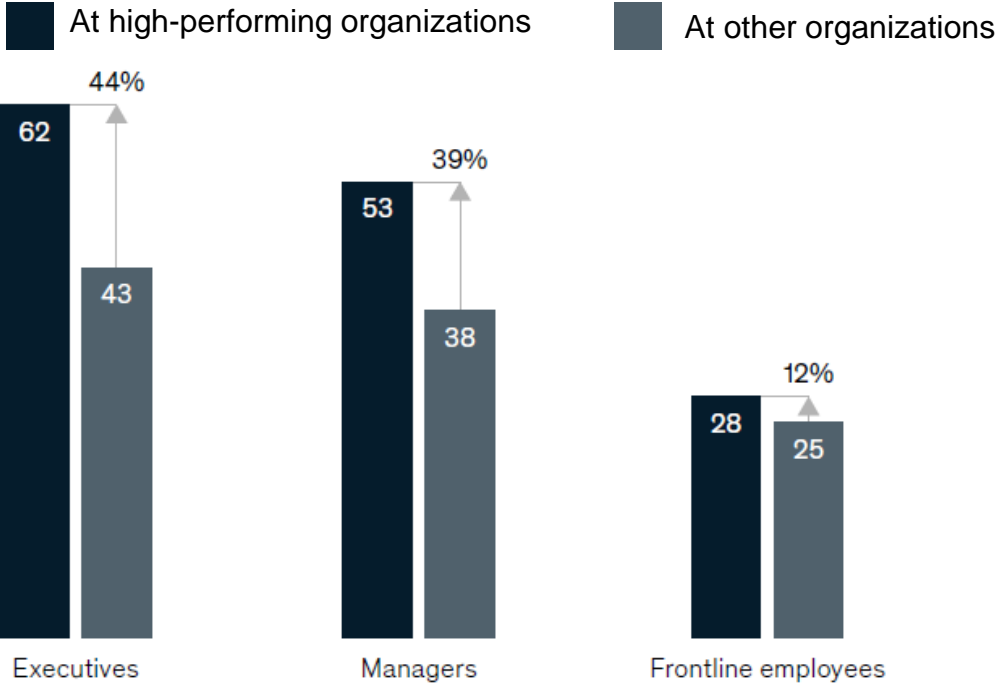
- Business Acumen
- Data Visualization Tools
 - Tableau, Google visualize
- Data Storytelling

The Age of Analytics: Data speaks for itself

Efficiency in Data Analytics is becoming a clear differentiator between Top-performers and Others – across industries

Organization performance and Employee's understanding of DA Concepts

Organizations' employees understand data concepts very well or completely, % of respondents



Source: 2019 McKinsey Catch them if you can: Survey

The link between insight-driven culture and business performance

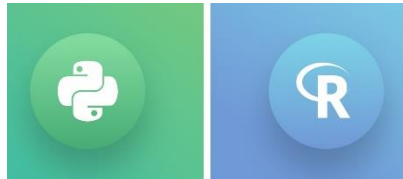


Source: Deloitte's 2019 Becoming an Insight-Driven Organization survey.

Note: Company that has seen annual rates of organic revenue growth and growth in earnings before interest and taxes of 10 percent or more in the past three years.

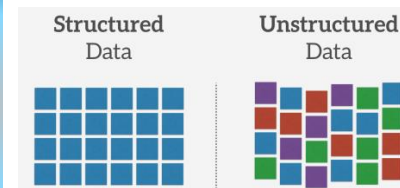
Evolution of Data and Tools

Beyond BI and Spreadsheets



- Commonly used: MS Excel spreadsheets, MS BI, IBM Cognos
- Latest Technologies: R, Python, AI Tools
- **Tool Sophistication:** Imperative due to the massive volume and variety of data
- Advanced tools also provide deeper insights and broader methods: Data mining, text analytics, Data visualization

- Images, Video files, Sensor data, Social media data etc.
- Difficult to put in row and columns and to interpret
- Can deliver a more comprehensive understanding and holistic view of bigger picture
- Advanced tools like Hadoop, cloud based architectures etc. are used



Leveraging Unstructured Data

Indispensable Skill for the Future Workforce

The Jobs Landscape in 2022

emerging roles, global change by 2022

133 Million

Top 10 Emerging

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. General and Operations Managers
4. Software and Applications Developers and Analysts
5. Sales and Marketing Professionals
6. Big Data Specialists
7. Digital Transformation Specialists
8. New Technology Specialists
9. Organisational Development Specialists
10. Information Technology Services

Top 10 Declining

1. Data Entry Clerks
2. Accounting, Bookkeeping and Payroll Clerks
3. Administrative and Executive Secretaries
4. Assembly and Factory Workers
5. Client Information and Customer Service Workers
6. Business Services and Administration Managers
7. Accountants and Auditors
8. Material-Recording and Stock-Keeping Clerks
9. General and Operations Managers
10. Postal Service Clerks

declining roles, global change by 2022

75 Million

3 of the **Top 10** skills as per the WEF are from Data Analytics

In India, during lockdown, ~50% of job-seekers are learning new skills for better career opportunities and long-term career growth.

Top Course, selected by ~22% of these was Data Science and Analytics *

** Survey conducted by Naukri in May 2020.*

Thank You

In the Digital World driven by Data, adoption of Data Analytics can ensure that behind every successful business decision driven by data, there is always a CMA.