

19th May, 2023

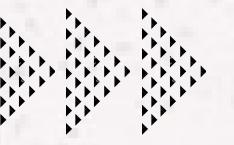


# Analysis Landscape

Over The Years 1990, 2023  
and 2050



# Devansh Ruia



# More Than 84%

Of companies` in the  
world have grown due to  
big data analytics

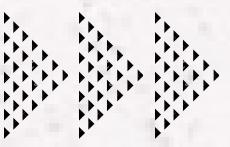


# What Is Analysis Landscape

In computer science, the term "analysis landscape" refers to the overall context and environment in which data analysis and computational techniques are applied, including factors such as available data sources, algorithms, tools, and the broader technological ecosystem.

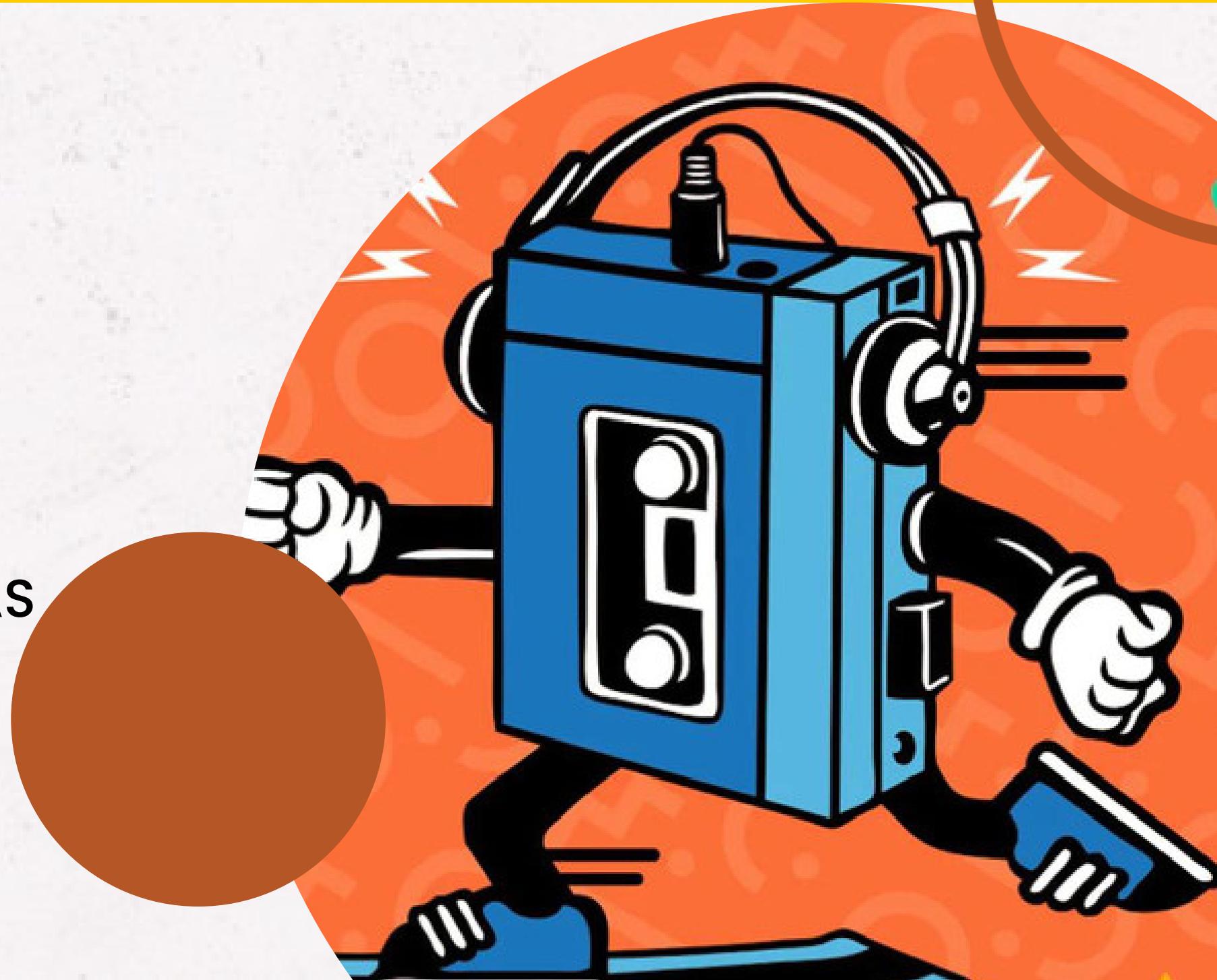


Understanding the analysis landscape is crucial for effectively applying computational methods, making informed decisions, and addressing challenges related to data processing and interpretation.

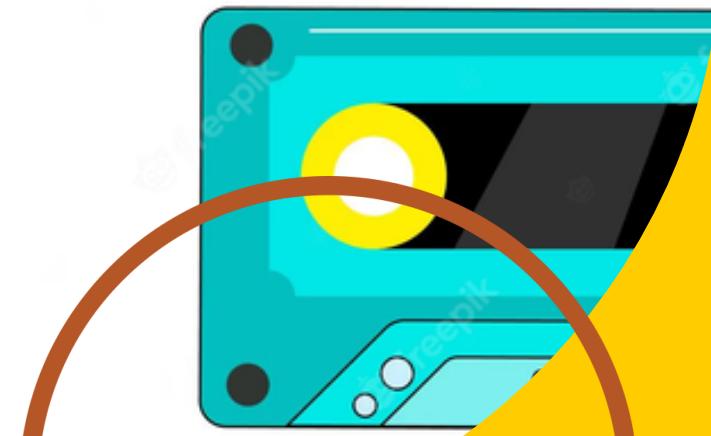


1990

- Statistical analysis primarily relied on manual calculations using basic tools like calculators and spreadsheets.
  - Data sets were typically small and limited in scope, making analysis more manageable.
  - Statistical software packages like SPSS and SAS were commonly used for data analysis.
- .....



- Data visualization techniques were limited to basic charts and graphs.
- Bayesian statistics gained popularity, offering a different approach to traditional frequentist methods.
- Machine learning and artificial intelligence techniques were not widely used in data analysis.
- Data mining and pattern recognition techniques were emerging fields with limited applications.



# 2023

- Data analysis in 2023 is characterised by the widespread adoption of advanced analytics techniques, including machine learning and artificial intelligence, to derive meaningful insights from complex and diverse datasets.
- The integration of big data technologies and cloud computing has enabled organisations to handle and analyse large volumes of data more efficiently and effectively than ever before.
- The role of data scientists has evolved to encompass not only technical skills but also a strong business acumen, as they are expected to translate data-driven insights into actionable strategies.



# 2023



Automated machine learning (AutoML) tools have gained popularity, empowering non-experts to build and deploy machine learning models without extensive programming knowledge.

# 2050



Artificial Intelligence (AI) and machine learning (ML) algorithms dominate the data analysis landscape, automating processes and making predictions with remarkable accuracy.



- Massive amounts of data are generated daily, requiring advanced algorithms and computing power to analyse and derive meaningful insights.
- Quantum computing revolutionises data analysis, enabling complex computations and optimising algorithms for unparalleled speed and efficiency.  
• • •
- Privacy and ethics become critical considerations, leading to the development of advanced techniques for secure data analysis and ensuring individual rights are protected.
- Real-time data analysis becomes the norm, enabling immediate decision-making and proactive problem-solving in various industries.

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# Big Names In Big Data Analytics



**Google**  
Technology Company



**Apache Hadoop**  
Open-source community



**M.I.T.**  
Research Institution



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