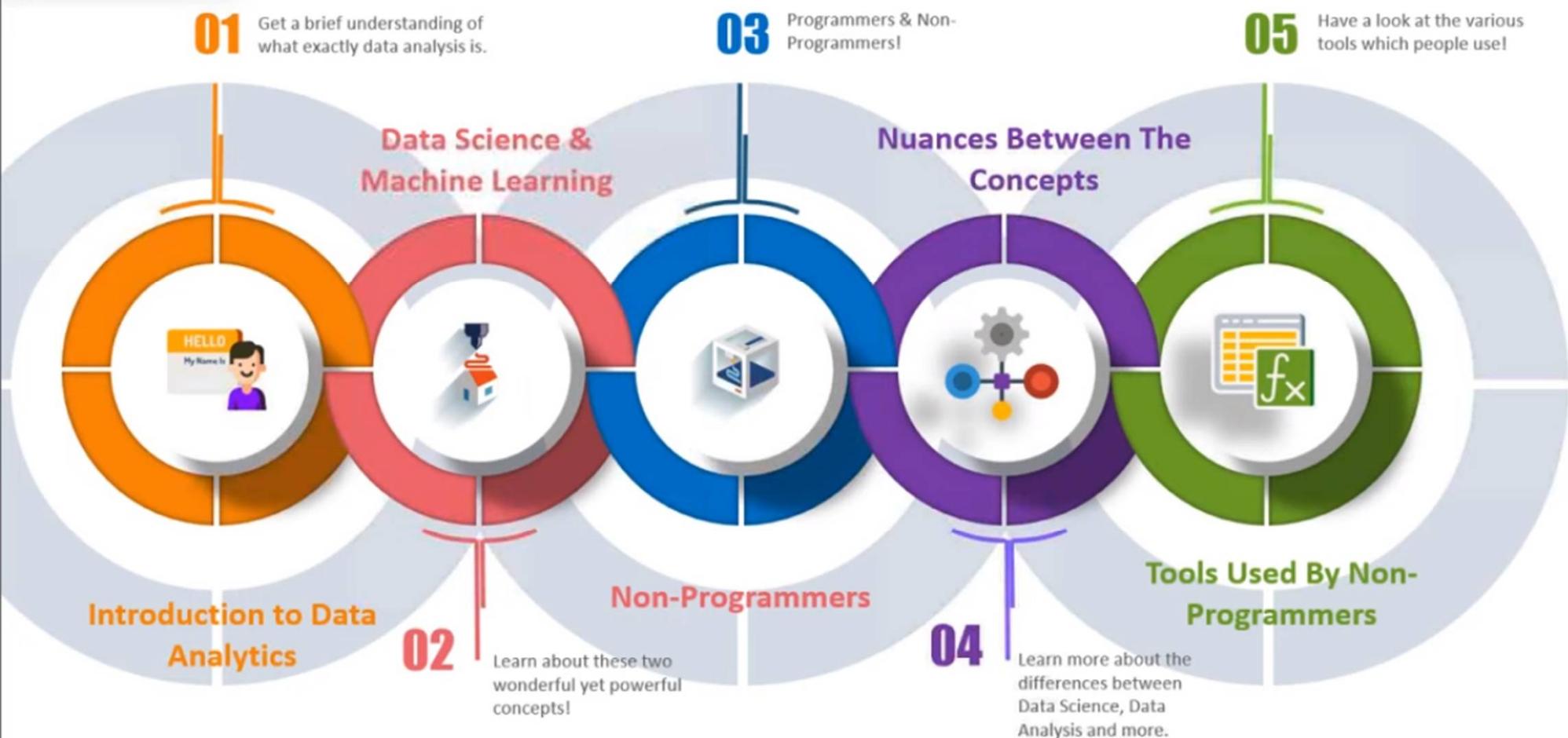
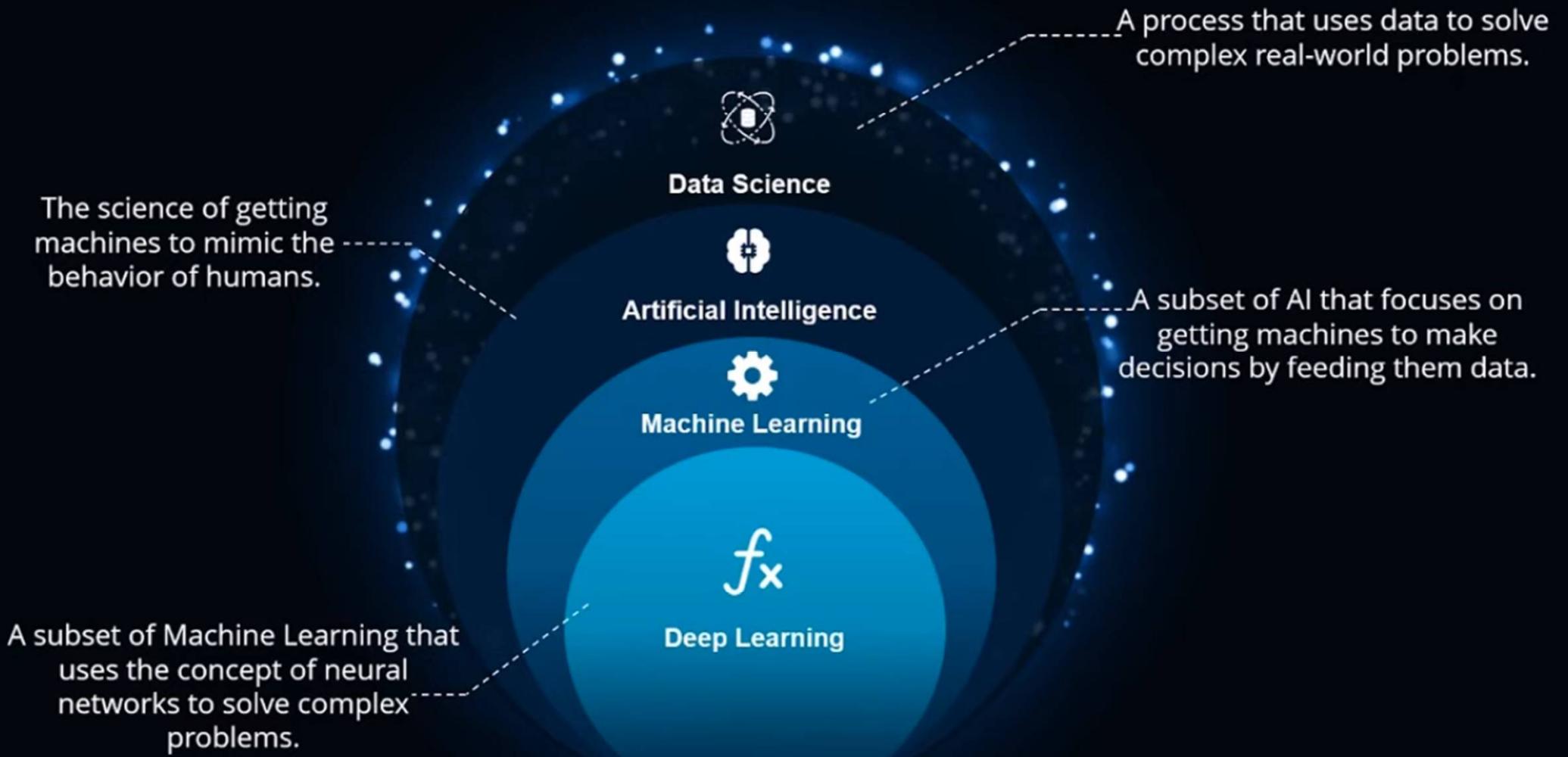


Data Science for Beginners

by Arnab Chakraborty

Agenda for this Session





Introduction To Analytics!



What is Data Analysis?

- › Living in a world surrounded by data
- › Handling data and using it aptly is important
- › Techniques used to analyse data and enhance business gains and productivity



Introduction To Analytics!



What is Data Analysis?

- › Living in a world surrounded by data
- › Handling data and using it aptly is important
- › Techniques used to analyse data and enhance business gains and productivity



Why Data Analysis?

- › Improving business requirements
- › Performing real-time market analysis
- › Generation of reports and studies
- › Gathering hidden insights



Introduction To Analytics!



Well, What is Data?



“
Quote
*Facts and statistics
collected together for
reference or analysis!*
”



Data Science?

- Data science is the study of data in a structured manner.
- It involves developing methods of recording, storing, and analysing data.
- This is later used to extract useful information.



Introduction To Analytics!



More Data Science!

muchmore
Data Science

Data Insight

"Quantitative data analysis to help steer strategic business decisions"

- This aspect of data science is about uncovering findings from data.
- Understanding complex behaviours, trends and inferences.
- It's about surfacing hidden insight that can help enable companies to make smarter business decisions.

“
Data Analytics
and Data Science
are the most fun
jobs today!
”

Introduction To Analytics!



More Data Science!

muchmore
Data Science

Data Product

"Algorithm solutions in production – Recommendation Engines"

➤ A "data product" is the asset that:

1. Utilizes data as input and push it down the pipeline
2. Processes data to return algorithmically-generated results



Data insight



Data product

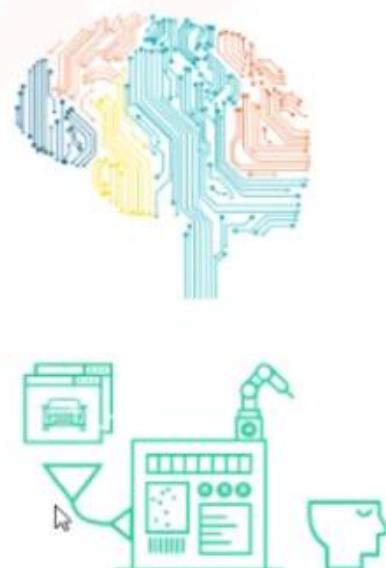
Introduction To Analytics!

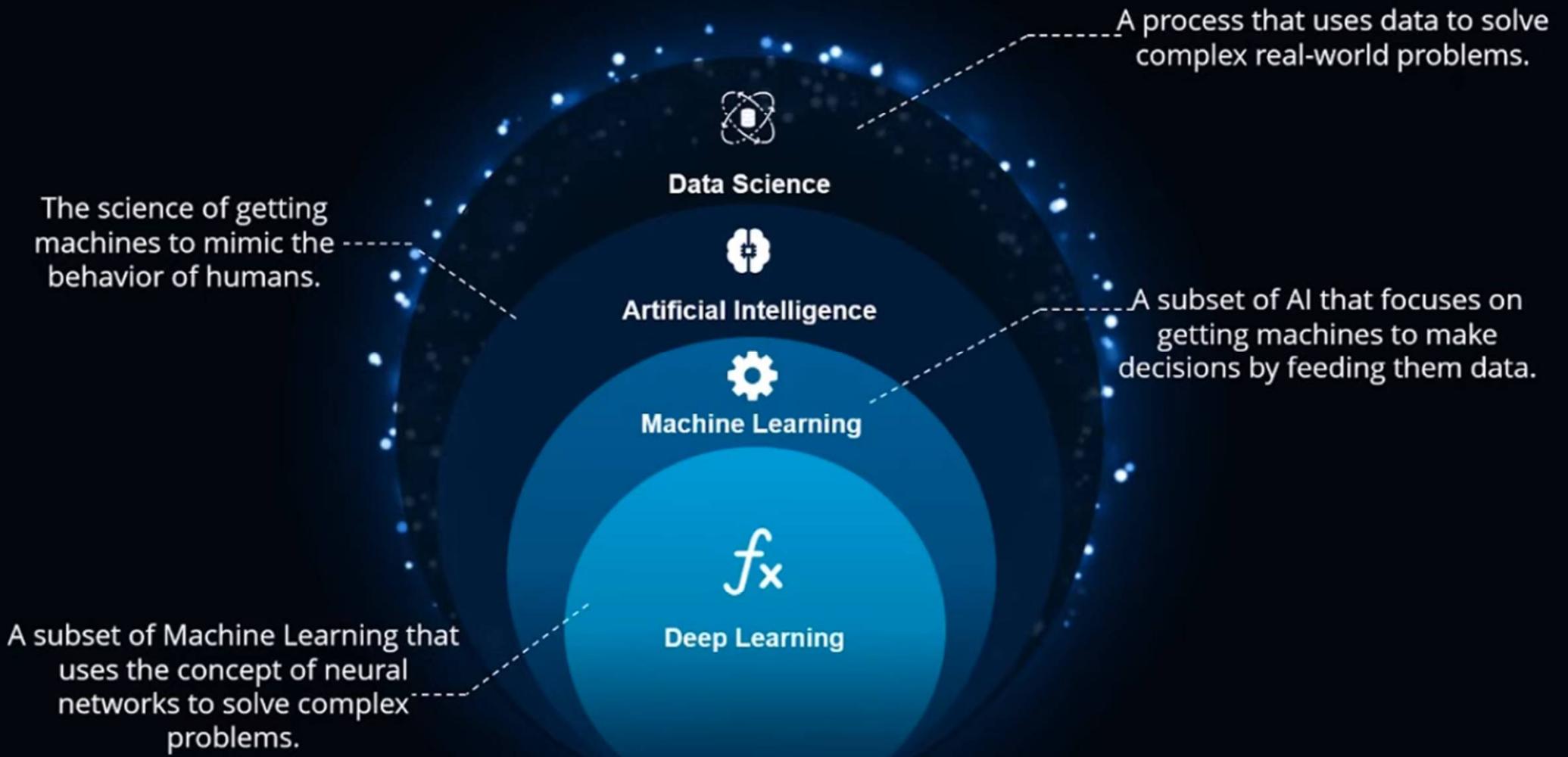


Machine Learning

"Machine Learning – A term which is very widely used in almost all the fields ranging from the simple optimizations of advertisements all the way to plotting the quickest space path and navigation system to Mars."

- Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn.
- After learning, they improve from experience without being explicitly programmed.
- This technology focuses on the development of computer programs that can access data and use it learn for themselves.





Introduction To Analytics!



Programmers v/s Non Programmers

Programmers:

- Programmers prefer to understand the dataset and work with it as efficiently as they can.
- They make it easy for users further down the chain (visualization, storyboarding etc..)



Non-Programmers:

- Non-programmers will want to attain easy analysis and visualization of data without having an in-depth knowledge of coding.
- They look out for tools and analytics which have an easy UI/UX to work with and provide them with the output.



Introduction To Analytics!



Comparing Data Science
& Machine Learning

Data Science

Machine Learning



Introduction To Analytics!



Comparing Data Science & Machine Learning



Data Science

- Relatively new career path
- Requires broader skillsets
- Operations Research
- Experimental Design
- Data Economics

Machine Learning

- Developing proof of concepts
- Optimizing requirements
- Tuning algorithms
- Furnishing proof of concepts
- Innovation with existing data

Introduction To Analytics!



More Comparisons



Data Scientist



Business Analyst



Introduction To Analytics!



More Comparisons



Data Scientist

- › Help business analysts
- › Automating BA's tasks
- › Tracking usage of data
- › Analysing metrics & designs



Business Analyst

- › Focus on Database design
- › Project management
- › Data Optimization
- › Designing reports



Introduction To Analytics!



More Comparisons



Data Analysis

Data analysis is a broader term that refers to the process of compiling and analysing data in order to present findings to management to help inform business decision making.

Data Analytics

Data analytics is a subcomponent of data analysis that involves the use of technical tools and data analysis techniques.



Introduction To Analytics!



Data Analytics Tools

"Certain tools which are very easy to grasp and make sense of"



Microsoft Excel

- Famous analytics tool in the industry
- Widely used for statistics and data modelling and easy to learn
- Can integrate with datasets easily

- Free tool which connects to any data source
- Creates Data visualizations, maps etc..
- Supports download of data in different formats



Introduction To Analytics!



Data Analytics Tools

"These tools require some prerequisites of working with data"



- Used for data manipulation and analytics
- Provides customer intelligence and multiple modules for web, social media and marketing analytics
- Powerful integrated data science platform.
- Can take data from Excel, SQL, Tera-data and many other sources
- Can make use of real life data too





Healthcare



Autonomous Vehicles



Smart Farming



Marketing

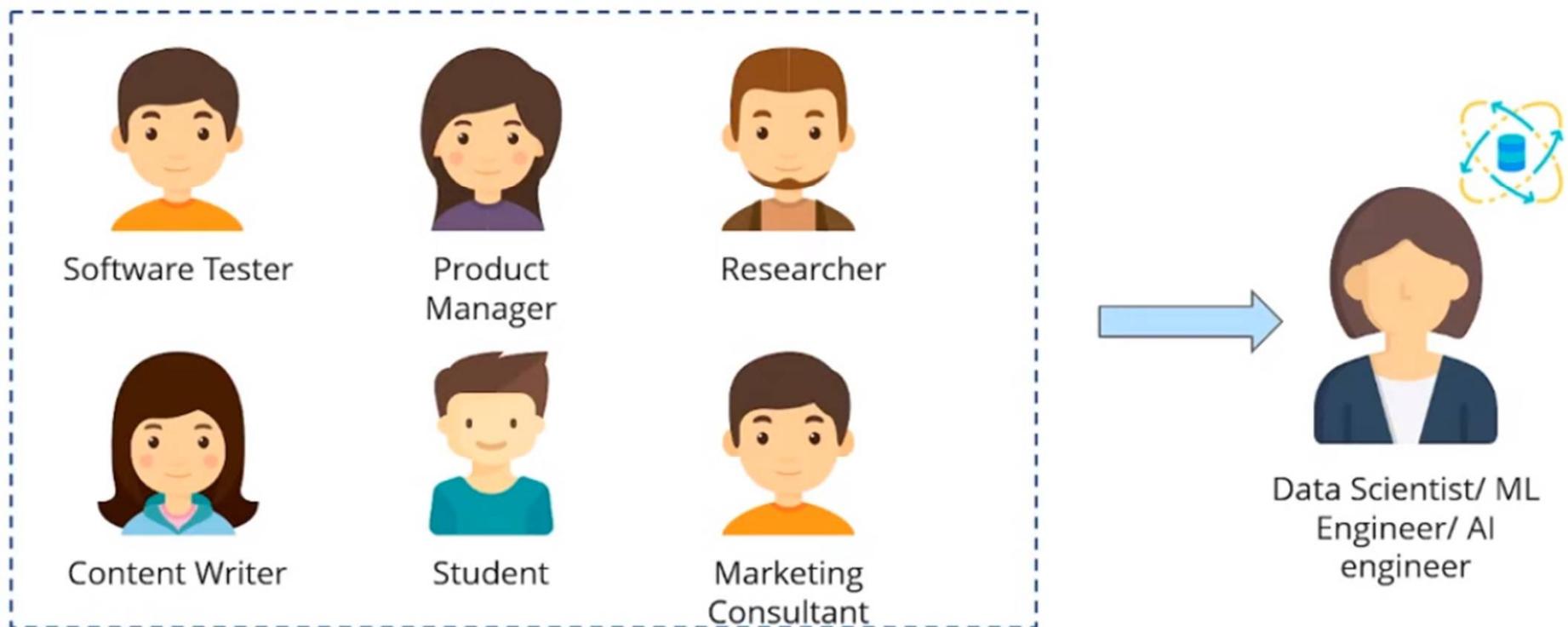


Banking



Artificial Creativity

NON-PROGRAMMERS?



FAQS

Q: I am looking to make a career in Data Science but I have no prior programming experience. Do I need to know programming for Machine learning?



FAQS

Q: I am looking to make a career in Data Science but I have no prior programming experience. Do I need to know programming for Machine learning?

Q: Are there any tools that can help me with Data Science & Machine learning without knowing any programming languages?



FAQS

Q: I am looking to make a career in Data Science but I have no prior programming experience. Do I need to know programming for Machine learning?

Q: Are there any tools that can help me with Data Science & Machine learning without knowing any programming languages?

Q: Do I need to know advanced mathematics to learn Data Science & Machine learning?



More on Data Science Tools



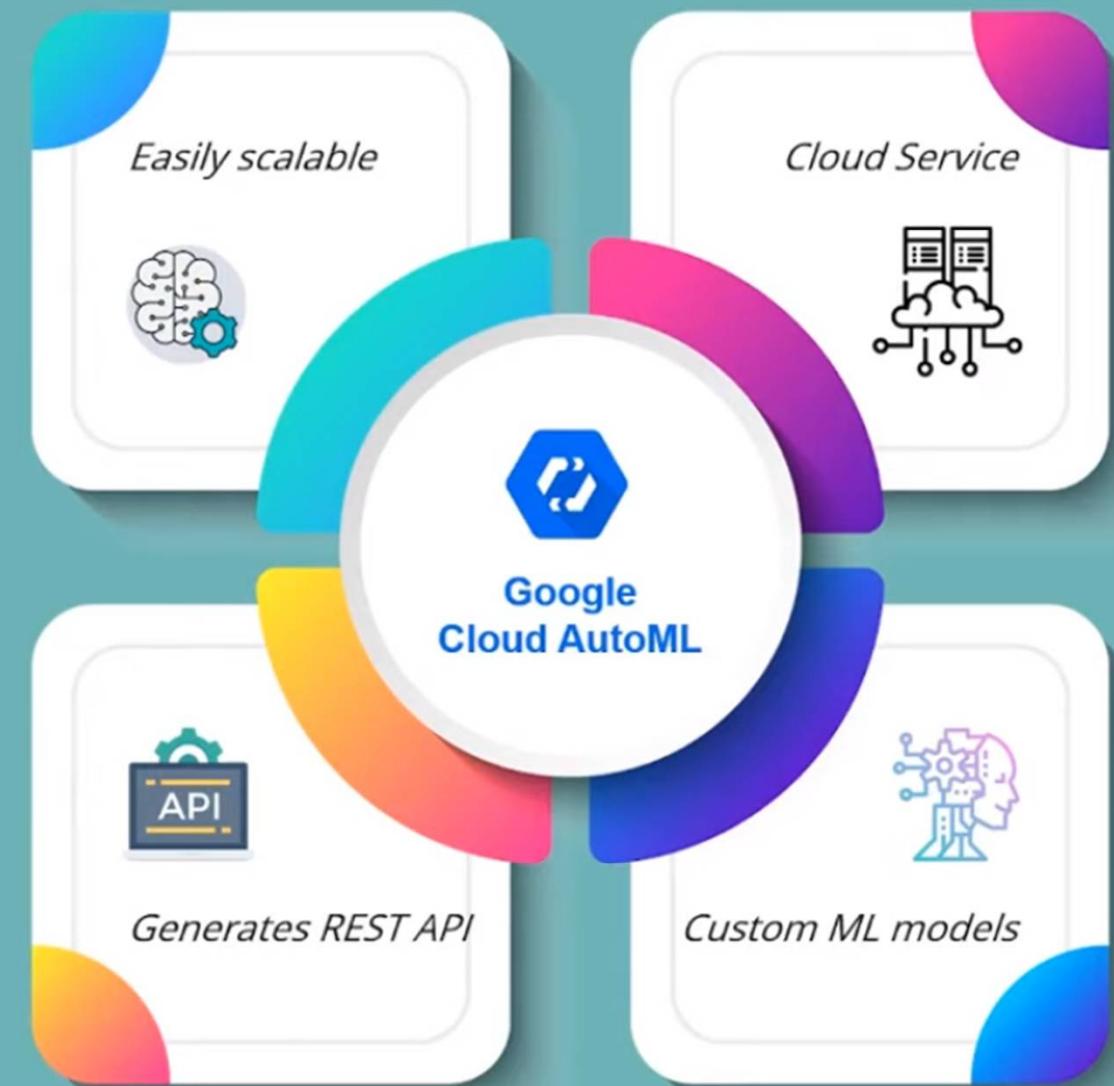








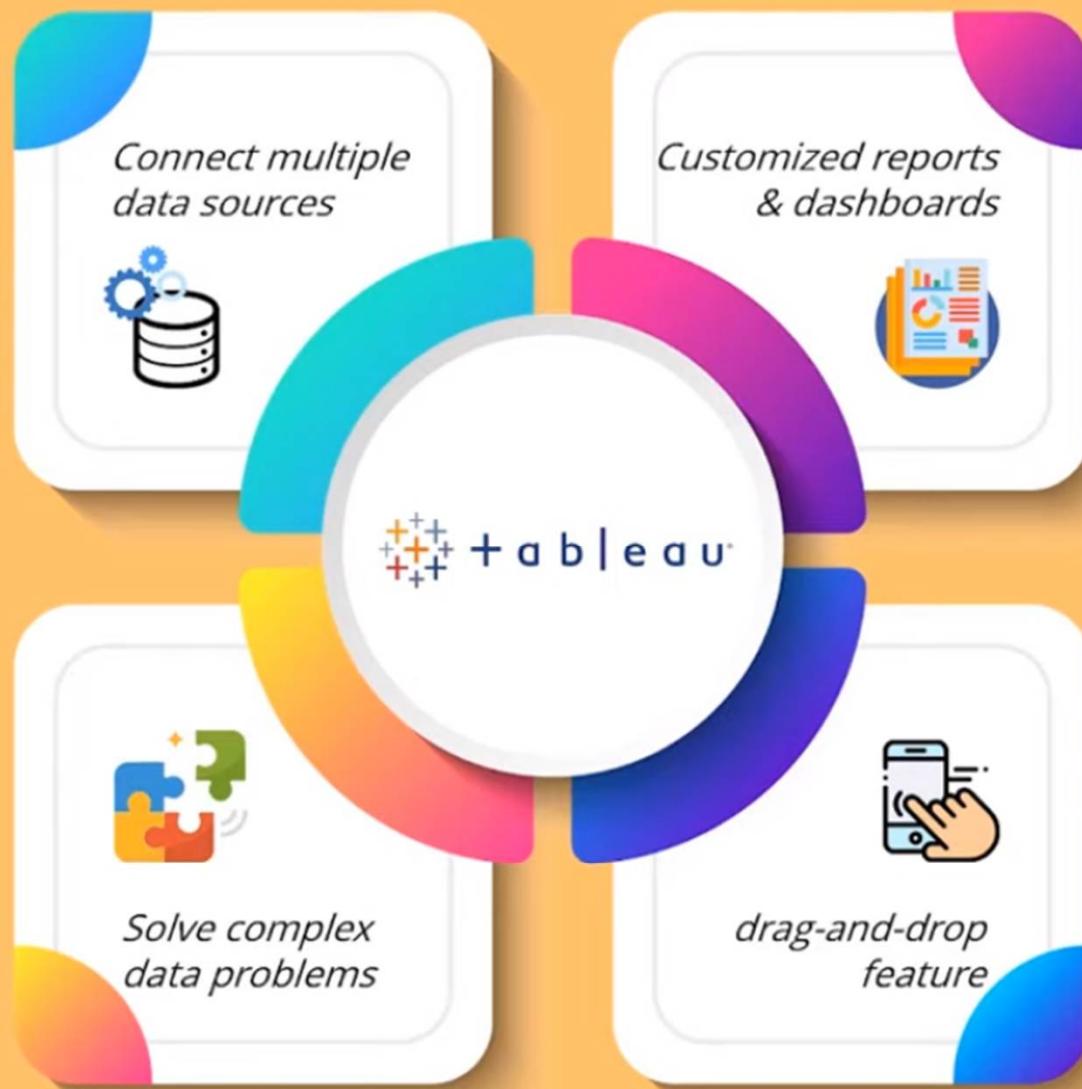
Google Cloud AutoML





AutoWeka
An Automated Data Mining Software Based on Weka





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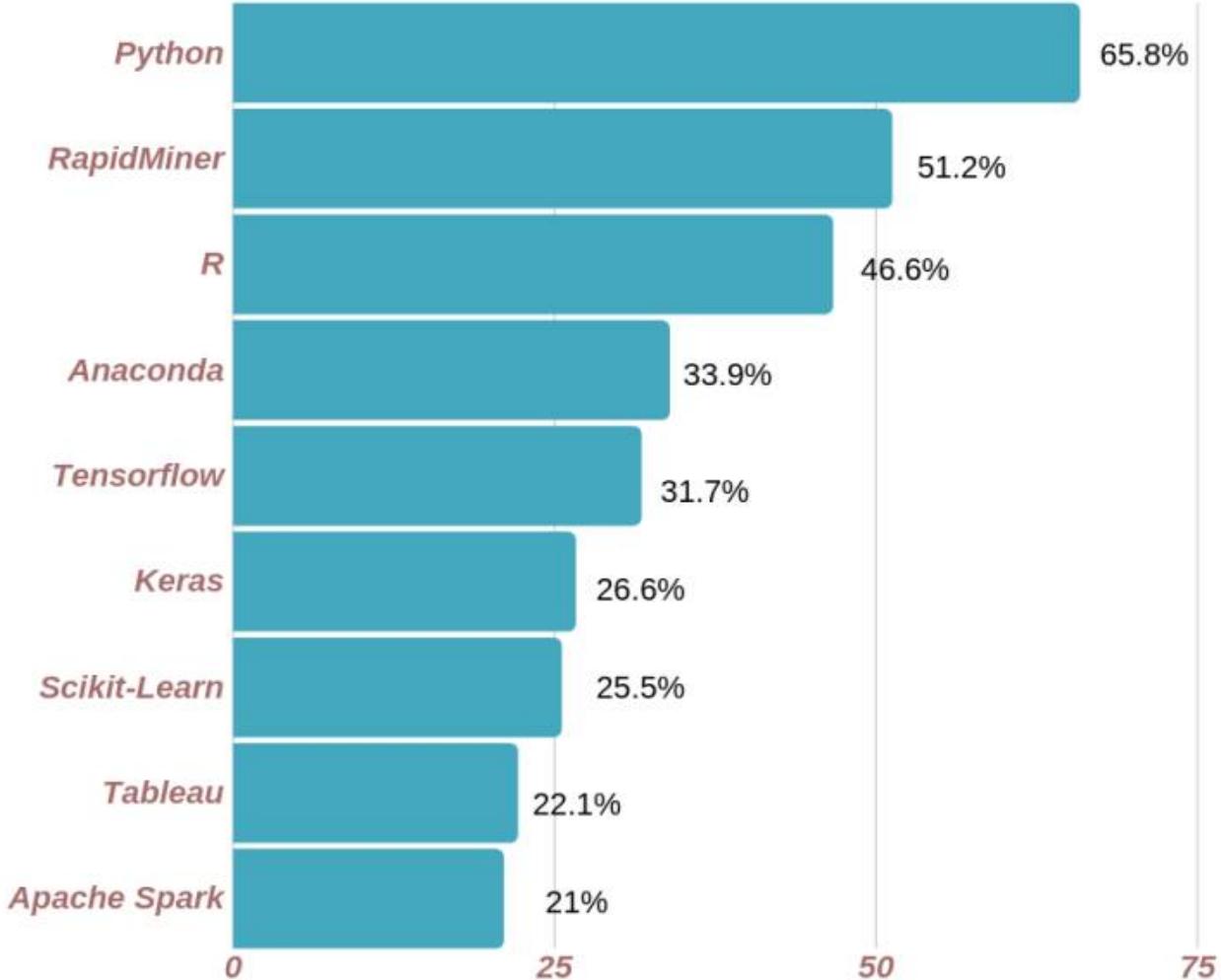


TRIFACTA





Here's a top-down polling of Machine Learning & Data Science most used tools in 2019.



Thanks for all your Attention...