

Data Visualization and Predictions with R Language

Workshop on R Language | September 12th, 2019



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Agenda

- **Data Visualization**
- **Predictions**
- Introduction to **R**
- **Features of R**
- **Benefits of R**
- Why **Shiny?**
- **Questions and Answers**

Data Visualization

- “The simple graph has brought more information to the data analyst’s mind than any other device”
- With ever increasing volume of data, it is impossible to tell stories without visualizations. Data visualization is an art of how to turn data into useful knowledge
- R has several systems for making graphs, but ggplot2 is one of the most elegant and most versatile. ggplot2 implements the grammar of graphics, a coherent system for describing and building graphs

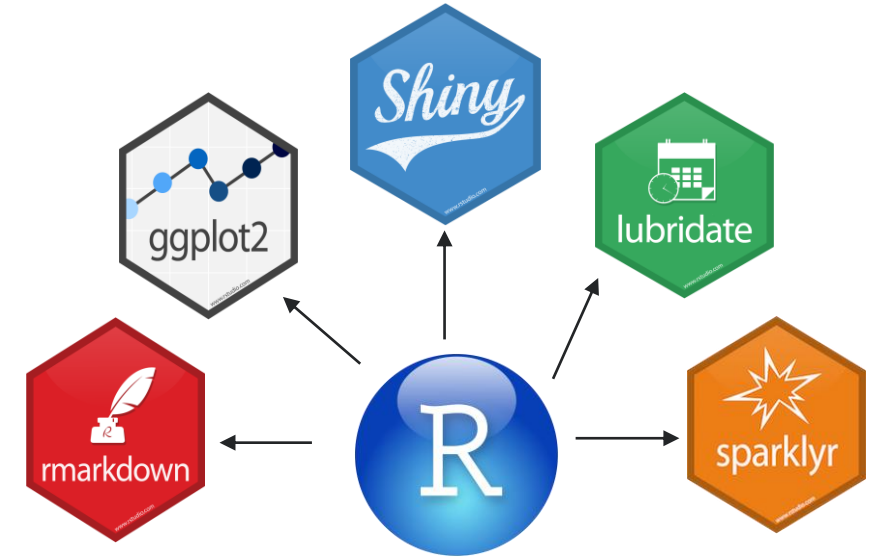
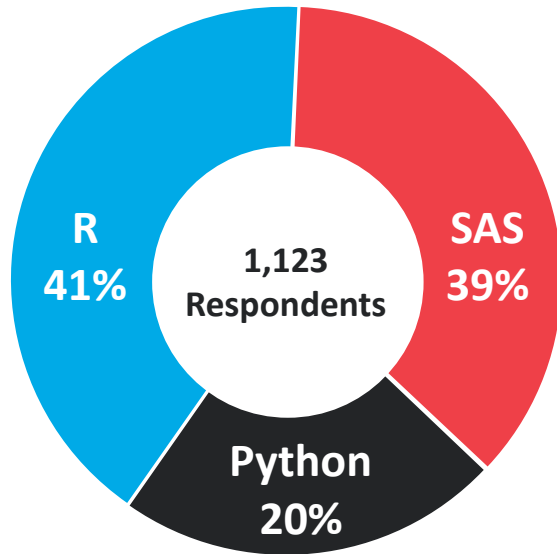


Predictions

- **Predictive** analytics is the practice of extracting information from existing **data** sets in order to determine patterns and **predict** future outcomes and trends
- Best algorithms for prediction
 - Naïve Bayes Classifier Algorithm
 - K Means Clustering Algorithm
 - Support Vector Machine Learning Algorithm
 - Apriori Machine Learning Algorithm
 - Linear Regression Machine Learning Algorithm
 - Decision Tree Machine Learning Algorithm



Introduction to R



- R is an open source programming language for statistical computing and graphics. It can be easily integrated with Tableau, Power BI, etc
- R is the best way to create high-quality analysis. RStudio is an IDE where we can create, modify and execute R applications
- It supports many packages which provide the functionality for free. A collection of packages is called library
- It supports various kinds of data sources like databases, streams, .csv, .xlsx, .txt etc



Features of R

- R is a well-developed, simple and effective programming language which includes conditionals, loops, user defined recursive functions and input and output facilities
- It has some unique features that make it very powerful,
 - Performing multiple calculations with vectors
 - Processing more than just statistics
 - Running code without a compiler
- Provides graphical facilities for data analysis and display either directly at the computer or printing at the papers
- R has an effective data handling and storage facility

Benefits of R

Free Open
Source Code



Runs
Anywhere



Supports
Extension



Provides an engaged
Community



Connects with
other languages



Infinite
Customizable

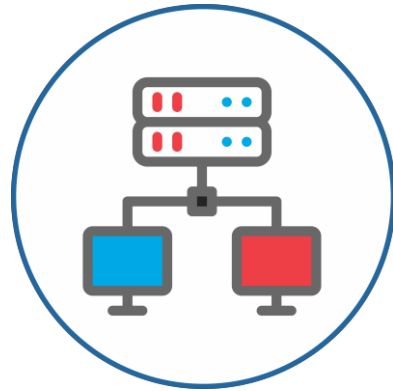




Why Shiny?



A web framework
for building **web
applications**



It provides a
two way
communication



It turns an analysis
into an **interactive**
charts



Application can
be easily
accessible



Questions and Answers Time!



We're more than happy to help out



Thank you

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