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EXPERIENCE BEYOND IT TRAINING

Data Analytics with SAS

Big Data Analytics is the process of examining and monitoring large chunks of data to look for patterns, trends, correlations and obtain other useful insights. Whether it is Healthcare, Social Media, Government organizations, Power and Transport industries, all need big data to function and perform their day-to-day operations.

SAS is one of the most commonly used Data Analytics tools. It is the undisputed leader in the Data industry and will remain so for a long time, thanks to its impressive features!

Why SAS?

- Data integration with SAS reduces development time.
- SAS offers a wide collection of statistical arrays.
- A good GUI offers easy learnability.
- It supports collaboration, code reuse as well as offers multi-platform scalability and interoperability.

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Why should you learn SAS?

- SAS holds the biggest market share with respect to jobs.
- The tool is extremely easy to learn.
- Innumerable job listings at any given time for SAS professionals with excellent starting packages.

Course Duration

- 30 Working Days

Curriculum

SAS® Programming : Essentials

- Introduction to SAS® foundation
- Introduction to SAS® programs

- **Accessing SAS® Data**
  a) Examining SAS® data sets
  b) Accessing SAS® libraries

- **Producing Detail Reports**
  a) Submitting report data
  b) Sorting and grouping report data
  c) Enhancing reports

- **Formatting Data Values**
  a) Using SAS® formats
  b) Creating user-defined formats

- **Reading SAS® Data Sets**
  a) Reading a SAS® data set
  b) Customizing a SAS® data set

- **Reading Spreadsheet and Database Data**
  a) Reading spreadsheet data
  b) Reading database data

- **Reading Raw Data Files**
  a) Introduction to reading raw data files
  b) Reading standard delimited data
  c) Reading nonstandard delimited data
  d) Handling missing data

- **Manipulating Data**
  a) Using SAS® functions
  b) Conditional processing

- **Combining SAS® Data Sets**
  a) Concatenating data sets
  b) Merging data sets one-to-one
  c) Merging data sets one-to-many
  d) Merging data sets with non-matches

- **Creating Summary Reports**
  a) Reading spreadsheet data
  b) Reading database data

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SAS® Programming : Data Manipulation Techniques

- **Introduction**
  a) An overview of SAS® foundation
  b) Course logistics
  c) Course data files

- **Controlling Input and Output**
  a) Writing observations explicitly
  b) Writing to multiple SAS® data sets
  c) Selecting variables and observations

- **Summarizing Data**
  a) Creating an accumulating total variable
  b) Accumulating totals for a group of data

- **Reading Raw Data Files**
  a) Reading raw data files with formatted input
  b) Controlling when a record loads

- **Data Transformations**
  a) Manipulating character values
  b) Manipulating numeric values
  c) Converting variable type

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- **Debugging Techniques**
  a) Using the PUTLOG statement

- **Processing Data Iteratively**
  a) DO loop processing
  b) Conditional DO loop processing
  c) SAS® array processing
  d) Using SAS® arrays

- **Restructuring a Data Set**
  a) Rotating with the DATA step

- **Combining SAS® Data Sets**
  a) Using data manipulation techniques with match-merging

SAS® Advanced

SAS® SQL : Essentials

- **Introduction**
  a) Overview of SAS® Foundation
  b) Course logistics
  c) Course data file
  d) Introducing the Structured Query Language
  e) Overview of the SQL procedure
  f) Specifying columns
  g) Specifying rows

- **Displaying Query Results**
  a) Presenting data
  b) Summarizing data

- **SQL Joins**
  a) Introduction to SQL joins
  b) Inner joins
  c) Outer joins
  d) Complex SQL joins

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- **Subqueries**
  a) Noncorrelated subqueries
  b) in-line views

- **Set Operators**
  a) Introduction to set operators
  b) UNION operator
  c) OUTER UNION operator
  d) EXCEPT operator
  e) INTERSECT operator

- **Creating Tables and Views**
  a) Creating tables with the SQL procedure
  b) Creating views with the SQL procedure

- **Advanced PROC SQL Features**
  a) Dictionary tables and views
  b) Using SQL procedure options
  c) Interfacing PROC SQL with the macro language

SAS® Macro Language : Essentials

- **Introduction**
  a) Course logistics
  b) Purpose of the macro facility
  c) Program flow

- **Macro Variables**
  a) Introduction to macro variables
  b) Automatic macro variables
  c) Macro variable references
  d) User-defined macro variables
  e) Delimiting macro variable references
  f) Macro functions

- **Macro Definitions**
  a) Defining and calling a macro
  b) Macro parameters

- **DATA Step and SQL Interfaces**
  a) Creating macro variables in the data step
  b) Indirect references to macro variables
  c) Creating macro variables in SQL

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- **Macro Programs**
  a) Conditional processing
  b) Parameter validation
  c) Iterative processing
  d) Global and local symbol tables