



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.

An Autonomous Institution

COURSE NAME : DATA ANALYTICS

II YEAR/ IV SEMESTER

UNIT – I INTRODUCTION

Topic: Project on DataAnalytics & KDD

Dr.K.Sangeetha

HoD

Department of Computer Science and Engineering



What Skills Do They Have?²

Both business analysts and data scientists are experts in using data to inform decisions, but they apply their skills in different ways, using the same or similar tools. The skills listed below describe someone who has earned a master's degree in the field.

● Business Analysts ● Data Scientists



Decision-Making

● Instigate change by transforming business insights from interdisciplinary data analysis into tangible resources for business decision-making.

● Discover the opportunity in datasets by mining data and writing machine learning algorithms to support decision-making process.



Applied Problem Solving

● Define business problems and translate statistical analysis into data-driven business intelligence that improves business performance.

● Create the foundation of analysis by which an applied business problem can be solved.



Data Analysis

- Research, interpret, and visualize raw data using predictive, prescriptive and descriptive analysis to make it useful and accessible for business users.
- Manage and organize large sets of multivariate data using methods like linear discriminant analysis and multilinear regression selection.



Analytical Models

- Understand, integrate, and prescribe solutions that use data modeling.
- Experienced statistical programmers using languages like and tools such as SAS, SQL, R, SPSS, Python, and Knime.



Database Management

- Define and align database requirements for various forms of data, coded and not coded, using tools like Teradata, Oracle, and Hadoop.
- Design and structure databases using tools like Teradata, Oracle, and Hadoop.



Every project needs a plan. And methodology to prepare the plan.
A project on data analytics does not imply only the use of one or more specific methods. It implies:

understanding the problem to be solved

defining the objectives of the project

looking for the necessary data

preparing these data so that they can be used

identifying suitable methods and choosing between them

tuning the hyper-parameters of each method

analyzing and evaluating the results

redoing the pre-processing tasks and repeating the experiments



Hyper-parameters and parameters whose values are set.

- The values of the **hyper-parameters** are set by the **user**, or some external optimization method.
- The **parameter** values, on the other hand, are **model parameters** whose values are set by a modeling or learning algorithm in its internal procedure.



References

- [Joao Moreira](#), [Andre Carvalho](#), [Tomás Horvath](#) – “A General Introduction to Data Analytics” Wiley -2018
- Dean J, —Big Data, Data Mining and Machine learning, Wiley publications, 2014.
- Provost F and Fawcett T, —Data Science for Business, O‘Reilly Media Inc, 2013.
- Janert PK, —Data Analysis with Open Source Tools, O‘Reilly Media Inc, 2011.
- Weiss SM, Indurkha N and Zhang T, —Fundamentals of Predictive Text Mining, Springer-Verlag London Limited, 2010.
- Marz N and Warren J,- Big Data, Manning Publications,2015
- Runkler T A, - Data Analytics: Models and Algorithms for Intelligent data analysis, Springer, 2012

<https://www.edureka.co/blog/data-science-vs-big-data-vs-data-analytics/>

