Data Science with Python

Course Duration: 120 Days

SNO	TOPICS
1	**Basic Python Programming**
	Introduction to Python
	Operators
	Data Types(Integer, String, List, Tuple, Dictionary, Set)
	Conditional statement
	loops
	Function
2	**Python with Data Science**
	Introduction to Data Science using Python
	Statistics and probability
	OOPs in Python
	NumPy for mathematical computing
	SciPy for scientific computing
	Data manipulation
3	**Advanced Statistics**
	Central tendency
	Variability
	Hypothesis testing
	Anova
	Correlation
	Regression
	Probability definitions and notation
	Joint probabilities
	The sum rule, conditional probability, and the product rule
	Bayes theorem
4	**Machine Learning & Prediction Algorithms**
	Machine learning using Python
	Supervised learning
	Unsupervised learning
	Dimensionality reduction
	Time-series forecasting
5	**AI & Deep Learning using TensorFlow**
	Introduction to Deep Learning and Neural Networks
	Multi-layered Neural Networks
	Artificial Neural Networks and various methods

	Deep Learning libraries
6	**Data Visualization with Tableau**
	Introduction to data visualization
	Architecture of Tableau
	Working with metadata and data blending
	Creation of sets
	Working with filters
	Organizing data and visual analytics
	Working with mapping
	Working with calculations and expressions
	Working with parameters
	Charts and graphs
	Dashboards and stories
	Tableau Prep
7	**Data Analysis with MS Excel**
	Entering data
	Referencing in formulas
	Name range
	Understanding logical functions &
	conditional formatting
	Important formulas in Excel
	Working with Dynamic table
	Data transformation for analysis
	Working with charts for data visualization
8	**Data Wrangling with SQL**
	Introduction to SQL
	Database normalization and entity-relationship model
	SQL operators
	Working with SQL: Join, tables, and variables
	Deep dive into SQL Functions
	Working with Subqueries
	SQL views, functions, and stored procedures