

COURSE NAME	DATA SCIENCE AND MACHINE LEARNING ALGORITHMS
COURSE DURATION	32Hrs
COURSE CONTENT	<p>Python Crash Course</p> <ul style="list-style-type: none"> • Introduction to Python Crash Course • Python Crash Course – Part 1 – Basics • Python Crash Course – Part 2 – OOPS concepts • Python Crash Course – Part 3 – Modules • Python Crash Course – Part 4 – Final • Python Crash Course Exercises – Overview • Python Crash Course Exercises – Solutions <p>SQL Basics</p> <ul style="list-style-type: none"> • Introduction to SQL • Explanation of Data • Data, Table, Primary Key, Foreign Key • Writing Queries for Insert , Update , Delete • Join operations • Group by, Order By , Asc, Desc, <p>Introduction to DataScience</p> <ul style="list-style-type: none"> • A short history • DataScience Introduction • Why DataScience? • Realtime Usage <p>Data Analysis-NumPy</p> <ul style="list-style-type: none"> • Introduction to Numpy • Numpy Arrays • Quick Note on Array Indexing • Numpy Array Indexing and Operations • Numpy Exercises Overview and Solutions <p>Data Analysis-Pandas</p> <ul style="list-style-type: none"> • Introduction to Pandas • Series • Data Frames • Panels • Exercises Overview and Solutions <p>Matplotlib and Seaborn</p> <ul style="list-style-type: none"> • Introduction to Matplotlib and seaborn • Exercises Overview and Solutions <p>Data Preprocessing Techniques</p> <ul style="list-style-type: none"> • Data Operations • Data Cleansing • Processing CSV Data • Date and Time • Data Wrangling

	<ul style="list-style-type: none"> • Data Aggregation • Processing Unstructured Data • Stemming and Lemmatisation <p>Data Visualization</p> <ul style="list-style-type: none"> • Chart Properties • Chart Styling • Box Plots • Heat Maps • Scatter Plots • Geographical Data • Graph Data <p>Machine Learning Algorithms Using RealTime</p> <ul style="list-style-type: none"> • Supervised and Unsupervised • Logistic Regression • Adaboost • Random Forest • K-Means <p>DataBricksIntroduction</p> <ul style="list-style-type: none"> • Signup Databricks Community Edition • Databricks Architecture • Spark Architecture • Datascience Using Databricks • Databricks Concepts • Clusters • Realtime Data Analysis using all Concepts <p>Azure Introduction</p> <ul style="list-style-type: none"> • AzurePortal Signup • Explanation of all components of portal • ADF Flow • Creating Sample ADF • Pipelines Introduction • Realtime Analytics using Dataware house • Business Intelligence • Linked services in ADF • Activities in ADF • Azure Active Directory
LAB	<p>Day 1: Python with Sql</p> <p>Day 2: Numpy and Pandas</p> <p>Day 3: Databricks using 2 DataSets</p> <p>Day 4 : Machine Learning Algorithms</p>