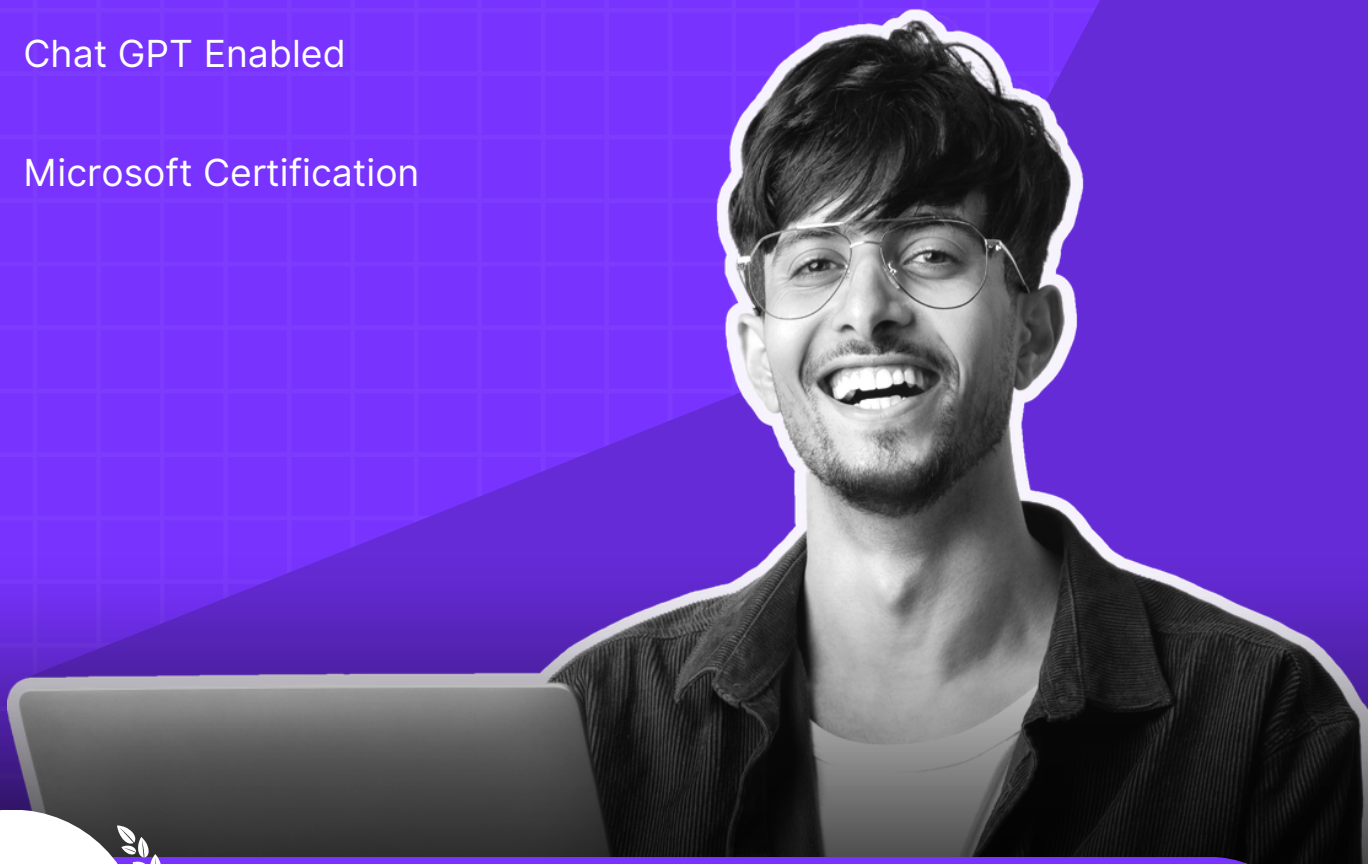
consoleflare.

MASTERS IN DATA SCIENCE

WITH POWER BI

8 Months Program

- Chat GPT Enabled
- Microsoft Certification



Consoleflare is Recognized by Siliconindia as One of the Top 10 Most Promising Data Science Training Institutes of 2023

#startupindia

Microsoft Partner

aws PARTNER

DPIIT

Adobe Solution Partner BRONZE

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Key Features

Learn Data Science **in Hindi**

Stand Out With **Microsoft** Certification

Accenture , PWC , Tata Group Project **Certification**

Lifetime Access To Course Content

500+ Hiring Partner Companies

Master Most-In-Demand Tools

python | NumPy | pandas | PySpark | learn | SQL Server

Power BI | matplotlib | databricks | seaborn | Azure Data Factory | BeautifulSoup

Who can join this course ?

This course is **designed for** those who are :

IT/Non-IT Graduates

MBA B.Com Bsc.
BA BCA B.Tech
Or Any Professional Degree

Working Professionals

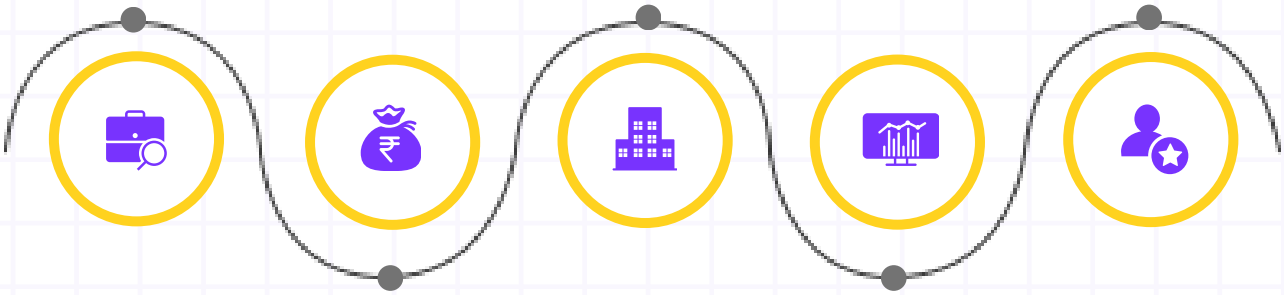
Finance Banking IT
Healthcare Supply Chain
Manufacturing Insurance
Retail Or Any Sector

What to expect by the end of the course:

Unlimited Job Opportunities

Opportunity to work For **Fortune 500 Companies**

Expertise In Data Science Tools



Pay Range Spanning From **8 to 45 LPA**

Strong Analytical Ability to solve Real World Problems

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What is Data Science?

Data Science is not a technology.
It is a Field of Study that uses multiple tools and technology to find meaningful information out of data.

Stages in Data Science

Collecting Data
from multiple sources

Cleaning and
preparing the data

Analyzing data
through advanced techniques and tools

Visualizing data
to identify patterns and trends

Interpreting data
to make data-driven decisions for organizations

₹8 to ₹45 Lakh per annum

As per World Economic Forum Report , Data Science is considered , one of the most in demand job role with package ranging from 6 to 45 LPA

WORLD ECONOMIC FORUM

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Why Companies are in Need of Data Scientists?

Let's talk about Big giants like Samsung, Coca – Cola or Microsoft.

Are their all products extremely successful?

While they have numerous successful products, they have also faced **product failures.**

Bad Decisions

- Wrong Market Strategy
- Poor Market Research
- No competitor analysis
- Overpricing or Underpricing

Data Scientists not only eliminates these bad decisions but comes up with much more refined strategies to avoid setbacks , **contributing to Organization's overall growth.**

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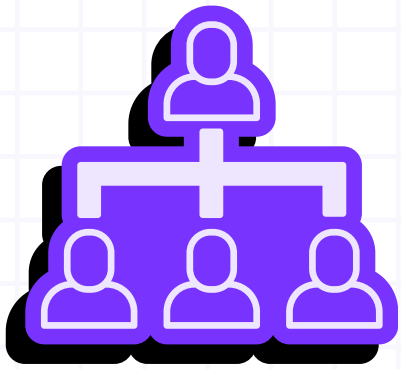
Who holds the decision-making power in the organization?

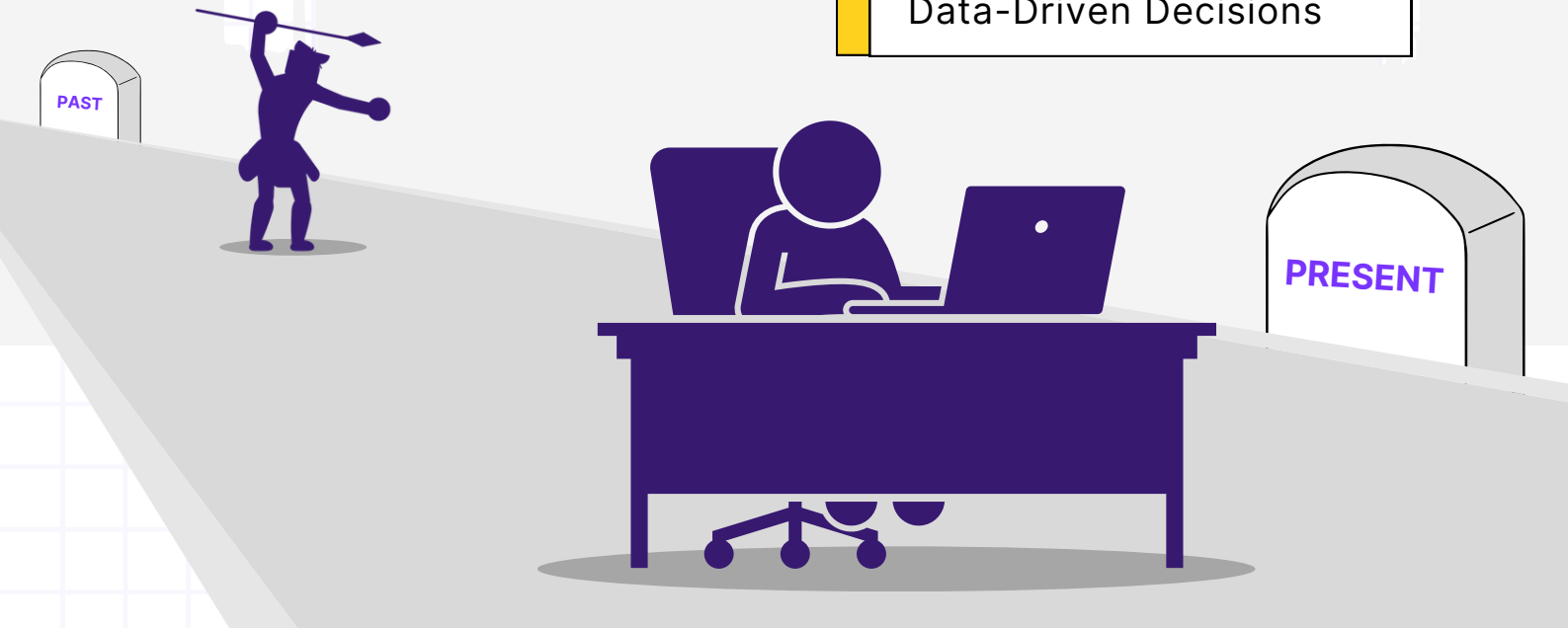


Top Management

Two Approaches to Decision Making

Historical Approach
Experience and Intuition

Modern Approach
Data-Driven Decisions



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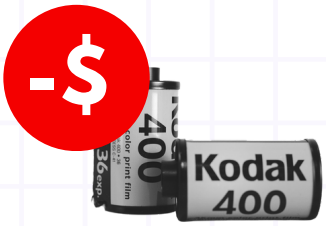
Why Historical Approach Doesn't Work?

Relying solely on experience **may lead companies to Huge Loss.**

NOKIA

Limited Perspective

Nokia's failure to adapt to the Android and iOS shift, rooted in rigid perspective, **led to losses** and its eventual acquisition by Microsoft.



Kodak

Subjective Biasness

Kodak's decline resulted from a **subjective bias favoring** film-based photography, impeding a timely shift to digital imaging.

YAHOO!

Missed Opportunities

Yahoo, missed opportunities to **dominate the search engine** and online advertising market, with their rigid decision-making.

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Companies Leveraging Data Science

Companies are using data **to make smarter decisions.**

HSBC

Personalized Recommendation

HSBC use data analytics for 39+ million customers, **driving customer-centric applications** such as personalization, recommendations, and **fraud detection.**

DHL

Collects Real Time Data

DHL, a logistics company, uses Big Data analytics to **collect real time data in delivering packages** and providing real time solutions, reducing losses by 30%, **saving $100 million.**

DREAM11

Provides Prediction

Dream 11 manages about 100 million requests per minute, with more than **16 terabytes of information** and billions of data points per day to provide **real time results and predictions.**

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Why Modern Approach Works?

No more Guesses! Data Driven Decisions allows businesses to make informed decisions based on concrete evidence rather than intuition.

Benefits of Data Driven Decision Making

- Smarter Decision
- Predict Future trends
- Valuable Insights
- Optimised Operations
- Risk Manage-ment
- Cost Reduction

McKinsey & Company

"A recent McKinsey **survey found that companies** that extensively use customer analytics are reporting **115% higher ROI** and **93% higher profits.**"

115%
Higher ROI
(Return on Investment)

93%
Higher Profits

Growth

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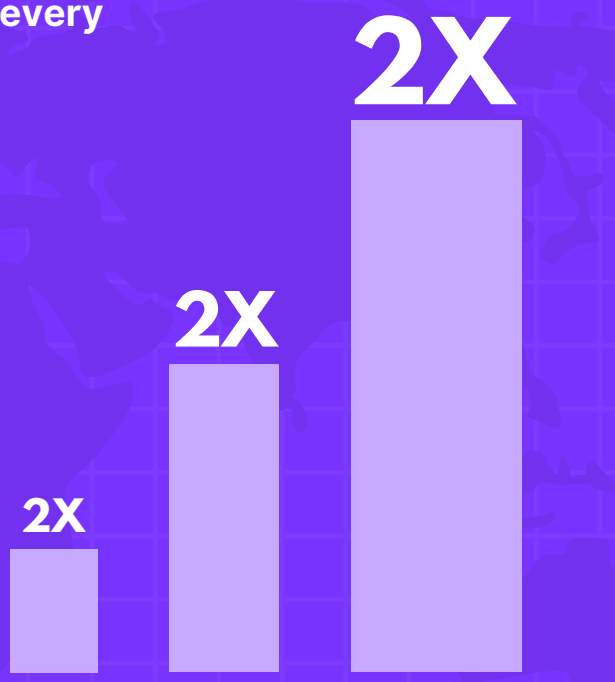
Why Data Science is trending?

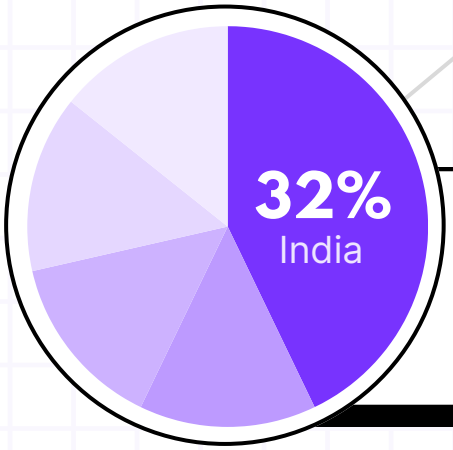
The amount of data in the world **doubles every two years.** The more data is generating, the more companies are in the serious need for data scientists.



Data is Growing Exponentially

Growth in Data Science Job Roles

According to LinkedIn Jobs Reports, Data science has experienced **over 650% growth in job requirements globally since 2012.**



Big Data Market

India alone will capture **32% of the big data market worldwide,** generating millions of job roles.

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India Trends

TOI

"According to a report by the Times of India, India is the **2nd highest country in the world in recruiting** for data science job roles."

29% HIKE

in **job postings** for data scientists in India in different job portals **last year.**

Data Science Job Roles in India as of 2023

10L+	4L+	6L+	4.5L+
Naukri.Com	Shine.com	Indeed	Linkedin

11 MILLION JOB OPENINGS

in data science are predicted by 2026 , **in india alone.**

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How Different Sectors are using Data Science?

Healthcare and Life Sciences

- Early Disease Detection
- Fraud Detection
- Patient Insights

United Healthcare · World Health Organization · gsk · CVSHealth

Pharmaceuticals

- Drug Development
- Supply Chain
- Pricing Strategy

Bharat Biotech · Emcure · Glenmark · Johnson&Johnson · Cipla

Banking

- Transaction Enrichment
- Anti-Money Laundering
- Customer Segmentation

HSBC · SBI · citi · WF · standard chartered

Finance

- Risk analysis
- Credit Scoring
- Stock Market Analysis

Deloitte. · KPMG · accenture · AMERICAN EXPRESS · PayPal

Retail and E-Commerce

- Targeted marketing
- Competitor Analysis
- Competitive Strategies

Walmart · TRENDS · croma A TATA Enterprise · BIG BAZAAR

Manufacturing

- Predictive Maintenance
- Defect Detection
- Process optimization

Nestlé · PEPSICO · ITC Limited

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Supply Chain and Logistics

- Real Time Tracking
- Route Optimization
- Predictive maintenance

Telecommunications

- Subscriber analytics
- Network Optimization
- Customer Churn Prediction

Government

- Crime Prevention
- Disaster Management
- Urban Development

Technology and Software

- Product Demand Analysis
- Cybersecurity Threat Detection
- Customer Behavior Analysis

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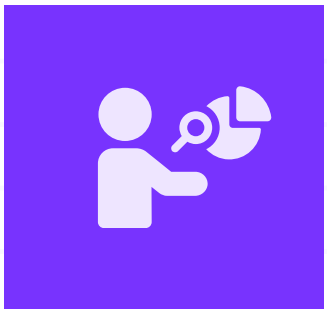
Differences In Job Roles and Responsibilities

Data Engineer

A data engineer develop the data pipeline for collecting, and storing large volumes of data.

Tools: Azure Data Factory, Python, SQL

Basic Pay – Range : 8 to 20 LPA



Data Analyst

Analyzes and interprets data to help organizations make informed decisions.

Tools: Python, SQL, Power BI

Basic Pay – Range : 6 to 20 LPA

BI Developer

Creates interactive reports using PowerBI for Reporting and Decision-making.

Tools: SQL, Power BI

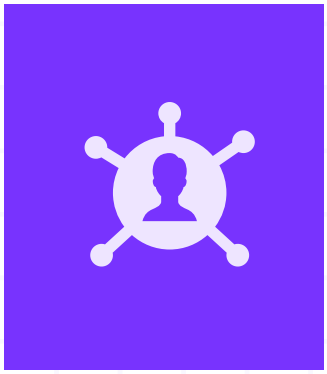
Basic Pay – Range : 6 to 15 LPA

Big Data Engineer/Analyst

Collect and analyze on large volume of data to find meaningful insights.

Tools: Azure Data Factory, Python, SQL, PySpark, databricks

Basic Pay – Range : 8 to 25 LPA



Data Scientist

Data scientist work with other Data analysts, engineers to ensure business goals are achieved.

Tools: Azure Data Factory, Python, SQL, PySpark, databricks, learn

Basic Pay – Range : 25 LPA +

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How it works?

DATA SCIENCE

Staging

It Is the **process of collecting** data from various sources .

Processing

Preparing and analyzing the data to find meaningful insights

databricks PySpark

Publishing

The **processed data is stored** in a centralized system, easily accessible to top management

Reporting

Generate **interactive dashboards** from the processed data to make decisions.

plotly

Your Journey to Success In Data Science

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Get Skilled

Career-Oriented Curriculum

- Curriculum designed to meet industry demands
- Learn everything from basics to advanced
- Flexibility to repeat any topic multiple times

Dedicated Mentorship For Career Transition

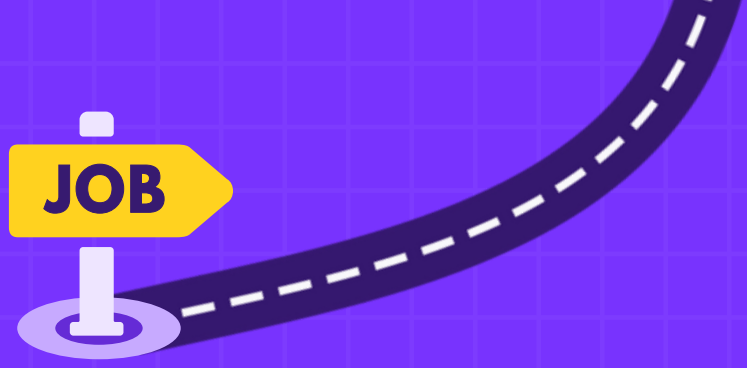
- Meet our mentors in live sessions and ask all your queries.
- One on One Interview Guidance From Mentors
- Connect to Mentors anytime.

Industrial Analytical Projects

- Solve the problems you will be solving as a Data Analyst
- Real-life world problems faced by Fortune 500 companies
- Domain Specific Projects to crack jobs in your own industry

Get Industry Certified

- Resume Booster : Microsoft DP – 900 Certification
- Skill-Validation: Accenture , PWC and Tata Group Industry Certificate
- Masters In Data Science Certification



Get Placed

Resumes that gets shortlisted

- Build ATS Based Resume in accordance to the Different Job Description
- Mention right keywords that impresses Hiring managers
- Prepare a resume that gets selected by Top Recruiters

Crack Toughest Interviews

- Learn the soft skills needed to crack interviews
- Master the most asked questions in most of companies
- Join Mock interviews, Get Past Interview Datasets and continuous support through Interview Process

Get Placed in Your dream Job

- Get Access to Interview Opportunities From Our Data Science Community
- Continuous Support From Resume Creation to Placement
- Crack Your First Job with right Certifications, Right skills and Right Approach.

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Course Roadmap

1. Python Programming
   - Projects
2. Data Analytics and Visualization with Python
   - Projects
3. Querying Data With SQL
   - Projects
4. Reporting With Power BI Dashboard
   - Projects

5. Wielding BigData Through PySpark
   - Projects
6. Predictive Analytics With Machine Learning
   - Projects
7. Automating Data Pipeline With Azure Data Factory
   - Projects
8. Major Projects
   - Get Certified

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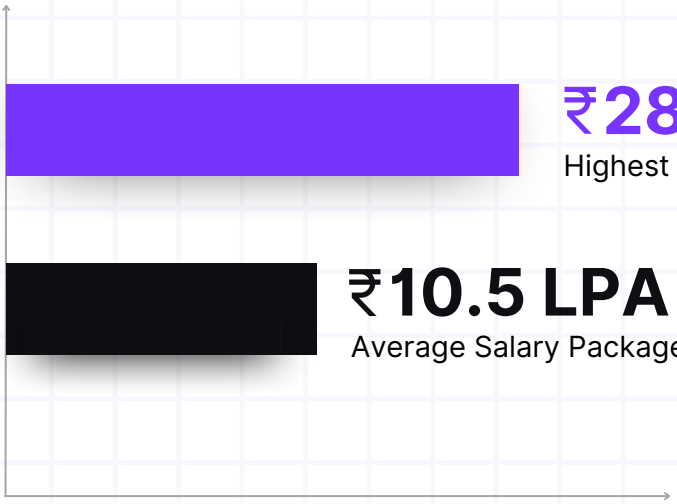
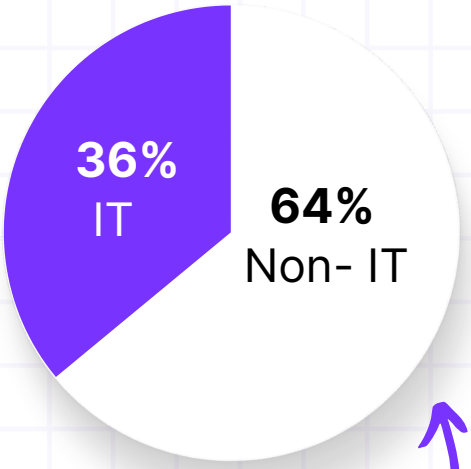
Placement Statistics



₹28 LPA
Highest Salary Package

₹10.5 LPA
Average Salary Package

500+
Hiring Partners



Background
Statistics

ConsoleFlare students get an average salary hike of 89% after graduating from ConsoleFlare.

89%

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Why Consoleflare?

Immediate value and Career Transformation

5000+ Career Transformation of Non-IT Professionals

Placement Support till you are Placed

Get Better Opportunities With Our Alumni Referrals

Strategic Partnership with our 500+ Companies

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Why Consoleflare?

Unmatched Learning Experience and Support

Take Live Sessions on Weekdays, Practice On Weekends

Personalized one-on-one sessions to resolve any doubts

Call your mentors, AnyDay, Anytime

Learn data science in Hindi

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Why Consoleflare?

Long-Term Benefits and Certification

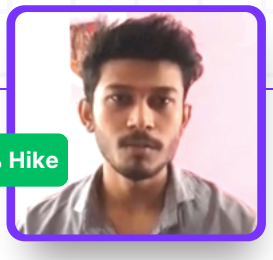
Lifetime access to all your course content

No Extra Cost For Course Repetition For 12 Months

Skill Validation Certification From top industry leaders

Stand Out From Crowd , Get Microsoft Certified.

Success Stories



160% Hike

Yogesh Kumar

I have **extensively worked on big data** technology like pyspark, databricks and Sql, after big data hadoop i was curious to learn spark so i joined masters in data science course by consoleflare. I started with hadoop where **Nihal sir explained** me the concept of hadoop like Hive, scoop etc in easy and relevant terms. Then after course completion the **placement support** was amazing.

Fresher to Big Data Engineer

100% Hike

Divya Sharma

I have got placed in **Hinduja Group** as a Data Analyst.
I had a huge gap of 6 years in my career and I was totally disconnected from corporate world. When I joined ConsoleFlare, I found that the training, mentors, placement support, **everything is top-notch.** I never could have imagined myself working again if I hadn't joined ConsoleFlare. **Thank you so much.**

Fresher to Data Analyst

210% Hike

Sanjay Singh

I want to share my experience that Consoleflare's data science course is really **easy to follow** and well put together. They lay out everything clearly, so it's simple to grasp even the tricky parts. The **trainers are the best part** – they're super friendly and always ready to help, no matter what you need. If you're thinking about learning data science, Consoleflare is a **great place to start!**

Sales to Senior Data Analyst to Data Engineer

Success Stories

230% Hike

Prashant Chauhan

I joined the Data Science and Machine Learning program. The mentors have helped me to **enhance my technical skills.** Specially Nihal sir helped me post-completion of the program and i was able to grab an **offer of 22 lacs.** A big thanks to Console Flare, Nihal sir and other mentors.

Catastrophe Modeling Analyst to Data Consultant

175% Hike

Ashish Kumar

Consoleflare's training is entirely **industry-led** and helps with understanding the practical ways of finding solutions using data analysis tools. They have **flexible class timings**. Also, they provided good placement assistance and helped me schedule interviews until I got selected. I am grateful to the whole team of ConsoleFlare for their contribution to **transforming my career.**

Fresher to Data Engineer

196% Hike

Akashdeep Kumar

ConsoleFlare's Data Science Training stands out for its **cost-effectiveness,** expert trainers with real-world experience, and comprehensive tool coverage. The added benefit of class **recordings and personalized interview preparation,** especially from Abhishek Sir, along with effective placement assistance, makes it a highly valuable choice.

Sales to Data Analyst

Success Stories

263% Hike

Rahul Shukla

Thank you team consoleflare for helping me **get placed RCPL.** What i like most about ConsoleFlare's Data Science training program and curriculum is that its' tailored to current market needs. **Their 24/7 support system** is more than just assistance, they help you at each step and are available all the time. To anyone looking to get into Data science should go for consoleflare. Thanks.!

Quality Analyst to Data Analyst

145% Hike

Shashank Karn

With Console Flare, the journey has been incredible. I got exposed to the modern data industry with the **Masters in Data Science program.** The instructors are highly qualified and skilled subject-matter specialists. It was a fantastic learning opportunity and helped me in **getting an amazing job** with a **good salary package**. Thanks, Console Flare.

Assistant System Engineer to Data Engineer

176% Hike

Mohd. Aamir

I felt the need to shift my career to data science and joined Console Flare. Their training is entirely **industry-led** and helps with understanding the practical ways of finding solutions using data analysis tools. It was one of the **best learning experiences** of my lifetime. With their continuous help and support I got placed as a **Data Analyst at VLCC Welness.**

Supply Chain Executive to Data Analyst

Success Stories

123% Hike

Aditi Saxena

I wish to express my heartfelt **gratitude to Console Flare** for helping me find a job. I must also give a special mention to Abhishek Mishra, Ayush Mishra, Nihal Jaiswal, and Aditya Jaiswal. They not only **resolved my project-related queries** but also provided essential guidance for near future. Each of them brings a **unique perspective** to the learning process, making it comprehensive and engaging.

Asset Manager to Finance Analyst

S&P Global

235% Hike

Deepak Suleja

I wanted to thank Consoleflare for your **incredible guidance** and support. Your expertise has been invaluable, and I truly appreciate the role Consoleflare played in my success. Thanks to your help **I got placed**, and I'm excited for the future with the skills I've gained. Your dedication and **personalized attention** have made a significant impact.

Technical Support to Data Analyst

3i Infotech
LIMITLESS EXCELLENCE

196% Hike

Jog Giri

I felt the need to shift my career to data science and joined Console Flare. Their training is entirely **industry-led** and helps with understanding the practical ways of finding solutions using data analysis tools. It was one of the **best learning experiences** of my lifetime. With their continuous help and support I got placed as a **Data Analyst at VLCC Welness.**

Fresher to Data Engineer

KPI PARTNERS

Success Stories

123% Hike

Sanskar Aggrawal

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Fresher to Data Analyst

235% Hike

Rahul Kumar

Consoleflare's Training provided is entirely based on the **Live Projects** and practical ways of finding solutions. They first make your **basics strong** and then move towards more technical parts. I joined Console Flare and completed my **Microsoft Power BI** certification, which helped in my Data Analytics & Business Intelligence interviews.

Technical Support to BI Analyst

266% Hike

Aamir Sultan

It was a satisfying training experience with Console Flare. **Nihal sir's teaching was incredible.** He taught me Python libraries lucidly and always encouraged me to learn concepts instead of memorizing thousands of functions. Because of Console Flare, I could switch to another company with a **good salary hike.**

Business Development Executive to Business Analyst

5000+ more Success Stories

Curriculum

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Learn Everything From Basics To Advanced

1 Python

Know How Programming Works

Understand the ABC of Programming and write your first program

- Introduction to programming basics
- Introduction To Python Programming
- Tool Setup
- How to write Programs

Importance of Python In Data Science

Know why companies are looking for analysts with python skills

- Why Python is So Popular ?
- 80 % market acceptance of Python.
- How Data Analysts use python.

Python Data Types and Variables

Understand the difference in Data and how to store data in variables

- Standard Data Types
- How variables are used ?
- Naming Convention
- Memory Allocation

Python Operators

Learn How numerical calculations are performed in python

- Arithematic Operations
- Assignment Operations
- Comparison Operations
- Logical Operations
- Operator Precedence

User Input in Python

By this chapter , you will be able to take values from user and create meaningful programs

- Input() function
- Type Conversion

Strings

Learn to deal with data in text format and master data cleaning techniques

- Memory Allocation of Numbers vs Strings
- Single Line vs Multiline String
- Indexing and Slicing in String
- String Concatenation
- String Formatting
- Fuctions Used in Stings
- String Methods
- String Manipulation
- Data Cleaning Techniques In Strings

Conditional Statements and Loops in Python

Understand how Conditions like if and nested if works and understand control flow of a program

- What are conditions and control flow
- if – statement
- If-else statement
- if-elif statement
- nested if statement
- while loop
- for loops
- range()

Data Structures

Learn How numerical calculations are performed in python

- List and List Comprehension
- Tuples
- Set
- Dictionary

Functions

Create your own functions in python to reduce number of scripts and repetitiveness

- What are functions
- Define a function
- Calling a function
- Parameters and Arguments
- Arbitrary Arguments
- Recursion

File Handling

Know how to perform operations and automation on Folders and Large Files

- OS Module
- Crud Operation on Files and Folders
- Access Modes
- Working with unstructured data

Exception Handling

Deal with the errors and exceptions in your python scripts

- Errors vs Exceptions
- Try except Methods
- Different types of Exceptions

Data Collection Through Python Libraries

Learn industry relevant skill to collect real time data from websites and multiple sources and automate the whole process

- Requests library
- BS4 library
- BeautifulSoup
- HTML Basics
- Convert data to json and excel Format
- Collect Product Data From Flipkart
- Data Collection Through API
- Data Collection Through Job Portals
- Data Collection of Stock Prices Through Money Control

2 Numerical Computation With Numpy

Introduction To Numpy

Learn How numpy is contributing to the data science world and is one of the most important and easy to use library for Numerical Calculation

- Introduction to library
- Installation of Numpy
- Overview of Numpy and its role in scientific computing

Understanding NumPy Arrays

Learn about different types of arrays and how to perform basic operations

- List To Array Conversion
- Single – Dimensional Arrays
- Multi – Dimensional Arrays (2D , 3D)
- Element Wise Operations

Array Operations

Get to know about the basic mathematical operations to perform between arrays

- Mathematical Operations in Numpy
- Universal Functions (ufuncs) in NumPy
- Broadcasting

Array Shape Manipulation

Learn how to reshape and transform the arrays for Array Operations.

- Transpose arrays
- Reshaping Arrays
- Concatenation and splitting of Arrays

Statistical Operations with NumPy

Focus on the statistical computing with NumPy

- Measure of Central Tendency (mean, median, mode)
- Measure of Dispersion (Standard Deviation, Variance, Range, IQR, Percentiles)
- Measure of Relationship (Correlation Coefficient , Covariance)

Working on File with NumPy

Work on a Uber Ride Dataset to find meaningful insights like average speed , Most busiest region , with the help of NumPy

- Excel File To NumPy Array Conversion
- Performing Data Manipulation and Calculation
- Work on Uber Ride Dataset to find key analysis

3 Data Manipulation and Analysis With Pandas

Introduction To Pandas

Get to know the importance of pandas in Data Science

- Overview and its role in Data Science
- Pandas Setup

Reading and Loading the Data

First step is to load the data in pandas to perform analysis

- Load Structured Data (Tabular Format, Excel , SQL)
- Load Semi-Structured Data (HTML , XML , Json)
- Load Unstructured Data (Emails, Surveys and Feedback , Records)

Data Structures in Pandas

Learn about Data Frame and Series , the two most important Data Structure in Pandas

- Introduction to DataFrame and Series
- Differences between DataFrame and Series.
- Indexing and metadata
- DataFrame Properties
- Series Properties
- DataFrame Basic Functions
- Series Basic Functions

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Data Exploration

Explore your data before analysis using Data Structure Properties and Functions

- Index and columns
- Head and tail functions
- Statistical summary
- Access Columns and Column Operations

Filtering and sorting in Pandas

Filter the data you need to work on , like you need to work on those customers who have purchased more than once

- Filter with iloc (index based filtering)
- Filter with loc (location based filtering)
- Isin() function
- Advance Filtering with set_index()
- Sort multiple Columns with sort_values()
- Sort indexes

4 Data Cleaning and Preprocessing with Pandas

Handling Missing and inconsistent Data

Deal with the inconsistencies and missing values in data with pandas

- Identify missing values using isnull()
- Drop and fill missing values
- Impute missing values using mean , median and interpolation
- Drop irrelevant columns
- Clean inconsistent data using fuzzy matching.
- Dealing with Outliers

Dealing with Duplicate Values

Find and remove the unnecessary duplicate values

- Identify Duplicated records
- Count and Filter Duplicate Records
- Remove Duplicate records with drop_duplicates()
- Data Deduplication Strategies

Check Data Validation

Data validation is the process of ensuring that data is accurate, complete, and meets specific requirements or standards.

- Perform string functions on series
- Set standard rules
- Remove Data that does not meet validation.

Check Type Conversion

Learn to convert data type of columns to perform operations

- Identify Data type of columns
- Use astype() to convert column types

Working on Different Tables

Learn how to work on multiple files such as merging and concatenating multiple files.

- Introduction to Joining and Merging
- Concatenation
- Inner and Outer Join
- Left and Right Join
- Join on Different Columns
- Merging on index

Deal With DateTime in Pandas

Learn how to perform operation on Dates with the pandas datetime functions.

- Convert column to datetime
- Performing Filter operations on Date
- Performing Aggregate Operations
- Datetime Series
- Timedelta
- Resampling
- Time Zone Handling
- Advanced Data Calculation With pd.DateOffSet

5 Statistical Exploration With Pandas

Descriptive Statistics

Learn to summarize and extract information from the numerical of a dataset

- Measure of Central Tendency and Dispersion
- Measure of Shape
- Skewness and Distribution
- Percentiles and Quartiles
- Aggregate Functions
- Group by Operation for aggregating data
- Normalize
- Pivot Tables
- Outlier Detection
- Advanced Statistical Techniques

6 Importing Data From SQL To Pandas DataFrame

Fetch Data From SQL Server

One of the key skill in Data Science is to fetch data from SQL Database, you will be using as a Data Analyst

- Connection To SQL Database
- Different SQL connectors and libraries
- Fetch , Process and analyze Data from SQL
- How to access data from SQL in cloud (AWS/Azure)
- Incremental Load from SQL to pandas Dataframe
- Automate your Script to execute script on daily basis.

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7 Data Visualization With Matplotlib and Seaborn

Introduction to Data Visualization

Learn the basics of visualization in this chapter

- Types of Visualizations
- Difference between plots and when to use then
- Introduction to figures and axes

Matplotlib Plots

Transform your analysis to Visualization with the matplotlib library

- Pair wise Data : Line Chart , Scatter Plot , Stack Plot , Bar , Stairs
- Statistical Distribution : Histogram , Box Plot , Violin , Pie Chart
- Gridded Data : imshow plot , streamplot

Seaborn Plots

Seaborn is much more advanced matplotlib. Create much more advanced graph with the help of seaborn

- Relational Plots : relplot , scatter , line plot
- Distribution Plots : displot , histplot,kdeplot
- Categorical Plots : cat , strip , swarm , boxplot, pointplot
- Regression Plots : lmplot , regplot
- Matrix Plot : Heatmap
- Theme and Styling

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8 SQL For Data Analytics

Introduction to SQL

Advance your data science career with this comprehensive SQL curriculum, covering syntax, database management, advanced data modification, and optimization

- What is SQL
- When SQL is used
- Microsoft SQL Server Installation

SQL Select Statements

Understand how to filter data based on conditions, perform range queries, and employ logical operators and pattern matching

- SQL Select Syntax and Where Clause
- SQL In and Between
- SQL And, Or, Not Operators
- SQL Like and Wildcards
- Assignment and Solutions

Sorting and Grouping in SQL

Gain skills to sort, group, and analyze data effectively in SQL, enabling you to derive meaningful insights

- SQL Order By
- SQL Group By
- SQL Having Clause
- SQL Min and Max
- SQL Count, Avg, Sum

Joins in SQL

Learn how to merge different tables using Different Joins Techniques

- SQL Inner Join
- SQL Foreign Key
- SQL Left Join
- SQL Right Join
- SQL Full Join
- SQL Self Join
- SQL Union
- Assignment and Solutions

Nested Complex Queries

Handle complex data scenarios by mastering SQL nested queries, existence checks, conditional operators, and date functions

- SQL Nested Queries
- SQL Exists
- SQL Any, All
- SQL Dates
- SQL Case
- Assignment and Solutions

Database in SQL

Perform database management tasks in SQL, including creating, dropping, and backing up databases

- Create Database
- Drop Database
- Backup Database

Data Type and Tables in SQL

Learn about data types, creating, altering along with optimizing queries through table aliases

- SQL Data Types
- SQL Create Table
- SQL Drop Table
- SQL Alter Table
- SQL Table Aliases
- Assignments and Solutions

Insert Records in SQL

Insert records in SQL and master auto-increment techniques

- SQL Insert
- SQL Insert using Select
- SQL Auto Increment
- Batch Insertion with a Single Statement
- Inserting Data into Tables with Multiple Columns
- Assignment and Solutions

Update Records in SQL

Update any record with Update statements in SQL Table

- SQL Update
- SQL Update Advance
- Updating Single and Multiple Columns
- Avoiding Unintended Updates
- Assignment and Solutions

Delete Records in SQL

Learn to Drop and Delete Records using SQL Query

- Delete Records in SQL
- Truncate Table
- Assignment and Solutions

Connecting MS-SQL with Python

Learn one of the most important key skill for data analysts to connect Python with MS- SQL Server

- Python to Connect to MS-SQL
- Python MSSQL libraries
- SQL Queries from Python
- SQLAlchemy
- PyODBC
- Establishing Connection Through Create_Engine

Windows Functions in SQL

Master proficiency in SQL window functions, essential for dynamic data manipulation and analysis

- Introduction to Windows Functions
- Syntax and Usage
- Common Window Functions
- Partitioning Data with Windows Functions
- Order By Clause in Windows Functions
- Examples and Scenarios

Stored Procedures and Functions

Learn Stored Procedures and functions in SQL enables efficient data processing, reusable code, improve performance

- Introduction
- Creation
- Execution
- Functions
- User-Defined
- Calling
- Benefits
- Best-Practices
- Assignment

Optimization of Queries

Know How to reduce query response time, and ensure efficient data management with Optimization Techniques

- SQL Index
- SQL Triggers
- Assignment and Solutions

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9 Interactive Reporting with Power BI

Introduction to Power BI

Learn most widely used BI Tool and create interactive dashboards

- What is Power BI?
- Why choose Power BI?
- Power BI and its competitors
- Why is Microsoft Power BI a leader in BI Analytics?

Data Cleaning & Transformation

Implement Data Cleaning Techniques we learnt in Power BI

- Connecting to different sources in Power BI
- Introduction data transformation
- How “Get Data” in Power BI works
- How to work with Power Query Editor
- Cleaning data in Power Query Editor

Data Modeling

Understand data modeling for designing efficient databases

- Introduction to semantic data models and Model Schema
- Star Schema & Snowflake Schema
- Relationships and Different types of cardinality
- Cross-filter direction and Default Summarization
- Data Categories and Data Formatting
- Date Hierarchies and Custom Hierarchies

Reporting in Power BI

Learn to create impactful reports in Power BI by mastering various visualizations and customization techniques

- Introduction to Power BI visuals
- Different types of visuals
- How to customize visual data and design
- How to convert any report mockup/image into Power BI Report
- Using hierarchies in visuals
- Drill-up & Drill-down
- Drill-through pages
- Default Tooltips & Custom Tooltips
- Map visuals
- Q&A Visuals

DAX & Advanced Reporting

Learn DAX for advanced reporting in Power BI, covering calculated columns, dynamic titles, toggle buttons, calculated tables and optimization strategies

- Introduction to DAX
- Calculated Columns and Measures
- Dynamic titles using measures
- Working with Bookmarks
- Buttons and bookmarks
- Create interactive menus with bookmarks
- Toggle buttons with bookmark
- Calculated Tables
- Different DAX functions and their use-cases
- Optimizing DAX expressions
- Row-Level Security

Publishing Reports and Power BI Cloud

Learn to manage workspaces, create dashboards, understand semantic models, and refreshing reports in the cloud, scheduling refreshes

- Power BI account and Licenses
- Publishing report to Power BI Service
- Workspaces
- Dashboards
- Quick Insights
- Semantic Model vs Report
- What is Power BI Gateway
- When do we need a gateway
- Refreshing report in Cloud
- Scheduled Refresh
- Mobile-Friendly Reports

Projects

Solve Complex Challenges and apply your skills to build Useful Reports

- Movies Dashboard
- Sales Dashboard
- Learners Performance Dashboard

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10 Wielding Big Data Through PySpark

Introduction to Big Data

Understand the Big Data Problem Companies are facing and its real-world applications.

- Big Data Problem Overview
- Key Concepts and Trends
- Real-world Applications
- Data Processing Approaches
- Comparison of Traditional and Modern Methods

Cluster Computing and Apache Spark Framework

Get to know how cluster computing works in Apache Framework.

- Understanding the role of Spark in distributed computing.
- Illustrating real-world use cases.
- Basics of Apache Spark Architecture
- Learn foundational components of Apache Spark.
- Practical exercises to reinforce understanding of Spark's architecture.

Databricks Account Setup and First PySpark Program

Setup Databricks Account and write your first PySpark Program.

- Walking through the process of setting up a Databricks account.
- Addressing common issues encountered during setup and programming.

Fundamentals of PySpark

Learn how to manipulate , type cast and perfom basic queries in PySpark.

- Basic operations for querying and manipulating data in PySpark.
- Leveraging native functions, type casting, and data exportation.

Advanced PySpark Concepts

Apply Pandas Aggregate Functions in PySpark and perform Data Cleaning with Advanced PySpark Functions.

- Aggregation, Datetime Operations
- Data Cleaning, User-defined Functions, Joins
- Transformations and Actions

Optimization Techniques in PySpark

One of the most important skill for Big Data Analytics is to apply Different Optimization Techniques.

- Lazy Evaluation, Broadcasting, Caching
- Pandafy, Partitioning, Bucketing
- Handling Data Skewness (Salting)

Data Management Strategies

Learn Data Management Strategies using Repartitioning.

- Understanding and implementing data repartitioning in PySpark.
- Utilizing Parquet files for intermediate data storage.

Advanced PySpark Features

Explore advanced PySpark features, including widgets and window functions

- Magic Queries, File System Commands
- Integrating interactive widgets into PySpark applications.
- Utilizing window functions for advanced analytics in PySpark.
- SQLSpark-PySpark Data Exchange

Integration and Practical Applications

Get Hands-on With Practical Applications using PySpark

- Integrating external libraries to extend PySpark functionality.
- Setting up Multi-node Clusters on Azure
- Designing end-to-end data pipelines using PySpark.
- Project: Netflix Recommendation Engine

Additional Course Elements

Learn storage integration, and interview preparation for a well-rounded understanding of Databricks in real-world applications.

- Mounting Storages to Databricks
- Configuring storage integration within the Databricks environment.
- Integration with Other Technologies
- Exploring integration possibilities with complementary technologies.
- Interview Questions
- Preparing for interviews with a set of structured questions and answers.

11 Automating Data Pipelines with Azure Data Factory

Introduction to Azure Data Factory (ADF)

Understand the importance of ETL and why we need them

- Overview of Azure Data Factory (ADF)
- Understanding Extract, Transform, Load (ETL)
- Importance of ETL in data processing
- Setting up Azure Account

Basics of Azure Data Factory

Learn how to get started with Azure and Azure Data Factory

- Key components of Azure Data Factory
- Basic terminology and concepts
- Exploring data connectors in ADF
- Defining datasets for data movement
- Configuring data sources and sinks
- Overview of the Copy Data tool
- Configuring copy activities
- Monitoring and troubleshooting data copy operations
- Introduction to Integration Runtime (IR)
- Types of Integration Runtime
- Configuring and managing Integration Runtimes
- Building a basic pipeline in ADF
- Adding activities to the pipeline
- Validating and debugging pipelines
- Configuring connections for Amazon S3 and ADLS Gen2
- Implementing data transfer pipeline

Advanced Pipelines with ADF

Master the Data Pipelining techniques with ADF

- Understanding incremental data loading
- Implementing change tracking in ADF
- Best practices for incremental loading
- Handling dependencies and relationships
- Introduction to control flow activities
- Sequence and dependency management
- If activity for conditional logic
- Loops in ADF pipelines
- Working with variables and parameters

Triggers and Advanced ADF Features

Automate the Data Pipelines with Triggers and Different complex ETL Processes

- Integrating Databricks with ADF
- Manual triggers and scheduled triggers
- Tumbling window triggers for time-based execution
- Data flow vs pipeline approach
- Filter, Join, conditional split, aggregation, sorting, pivot & unpivot transformations

Real-world ETL Scenario in Azure Data Factory

Implement ADF in your data warehousing projects

- Applying learned concepts in a practical ETL scenario
- Designing and implementing an end-to-end ETL pipeline

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12 Predictive Analytics With ML

Introduction to Machine Learning

Get to know what machine learning is and understand the fundamental concepts, types (Supervised, Unsupervised, Reinforcement), and applications of Machine Learning.

- Linear Regression
- Internal working with Maths
- Python code with dataset
- Practice Dataset

Multiple Regression

Analyze and model the relationship between variables, make predictions, and understand the impact of independent variables on the dependent variable in a linear context.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Logistic Regression

Predict and understand the likelihood of binary outcomes, making it valuable for classification problems such as spam detection or disease diagnosis.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

K nearest neighbour

IT enables you to predict outcomes based on the majority vote, making it effective for pattern recognition and recommendation systems.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Decision Tree

Decision trees allow you to make decisions by recursively partitioning the data based on features.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Random Forest

Random Forest is a learning technique that combines multiple decision trees to enhance predictive accuracy.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Naive Bays

Naive Bayes is a probabilistic method used for classification, especially in scenarios like text classification.

- Internal working with Maths
- Python code with dataset
- Practice Dataset

SVM

SVM is a strong algorithm for classification, creating the best possible boundary between different groups in data

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Unsupervised Learning

Explore data without labeled outcomes, helping to uncover hidden structures, relationships, or clusters within the dataset

- K means Clustering
- Internal working with Maths
- Python code with dataset
- Practice Dataset

Hierarchical Clustering

Learn Hierarchical clustering to organize data in tree structure

- Internal working with Maths
- Python code with dataset
- Practice Dataset

Bonus(introduction about other AI tools)

Generate human-like language with NLP, manipulate images and videos using OpenCV, build conversational agents with ChatGPT.

- Reinforcement learning
- NLP
- Open CV
- Chat GPT
- STable Diffusion

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Projects

1 British Airways

BRITISH AIRWAYS

Sentiment Analysis and Customer Experience

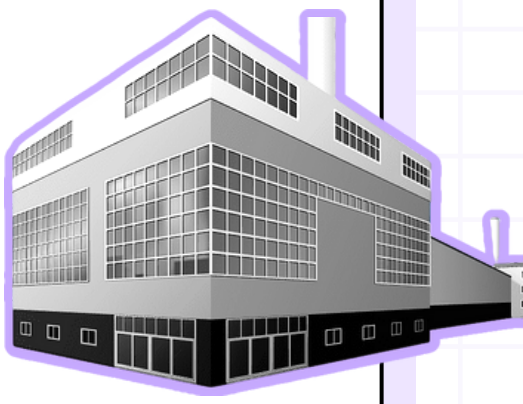
Aviation industry highly focuses on improving their customer experience. Use big data analytics to collect the reviews from Flight Passengers and finds the most common positive and negative reviews.

2 PepsiCo

PEPSICO

Optimizing Warehouse operations with Supply Chain Analytics

Warehouse at PepsiCo Deals with three factors: Picking. Process. Execution. Formulate and present a best plan for the execution of the orders in the least possible time considering the Turn Around Time.



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Projects

3 Flipkart

Market Basket Analytics and Sales Growth

Flipkart with its 400+ million registered users implements data analytics to recommend best products. Implement Market Basket Analysis to provide recommendation to users and increase Sales revenue.

4 American Express

Card Limit Analysis For Targeted Marketing

Minimize default risk by setting suitable credit limits based on income, credit rating, improving risk management, targeted marketing efforts, and increasing profitability.

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Projects

5 BMW

BMW's Electronic and Hybrid Vehicle Trend Analysis

Uncover insights into the most popular models and identify the most environmentally friendly choices by understanding consumer preferences and environmentally conscious choices.

6 Accenture

Content Creation and Market Trend Analysis

Develop a content creation strategy for a social media client, working on identifying and incorporating new trends to enhance the client's online presence.

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Projects

7 Tata Group

Tata IQ Optimize

Collaborate with Tata IQ to optimize business processes, presenting key insights to a client for process optimization and improved efficiency.

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8 PWC

Customer Retention

Clean, wrangle, and visualize telecom customer data using PowerBI to assist the client in better retaining their customers and improving overall client relationships.

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50+ more Domain Specific Projects

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Our Alumni's are at

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HINDUJA
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THANK YOU!

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