

## NetTech India



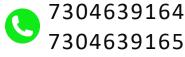
Post Graduate Certification Program in DATA

SCIENCE

**OUR BRANCHES** 

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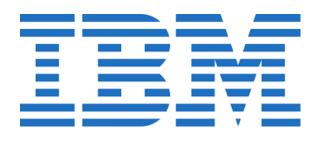
Pune

### **CERTIFICATIONS OPTIONS AVAILABLE**















## **ABOUT US**

**NetTech India Training Institute** offers a high-quality learning experience in the field of IT training to train students on brand new technologies and train them to deliver the desired results with commercially relevant and re-organized technical skills.

The probability of achieving your dream job will keep on increasing day by day once you complete a course in **NetTech India**. We also focus on improving soft skills in terms of communication, leadership, teamwork, external appearance, and attitude which helps everyone to be professional in all the aspects of their career.





## ABOUT DATA SCIENCE

Being a Data Scientist is one of the hottest and trending career option of the decade. The demand for data scientists is huge, the number is said to be much higher than the available candidates. A Data scientist performs research and analyses data and help companies flourish by predicting growth, trends and business insights based on a large amount of data. Basically, data scientists are big data wranglers. They take huge data and use their skills in this mathematics, statistics and programming to clean and organise the data.



# BENEFITS OF DATA SCIENCE

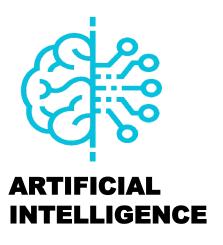
- Career Growth Higher Pay & Position
- Encourages professional Development
- Enriches self-image and Reputation
- Enhances professional Credibility.
- Abundant Job Opportunities
- Used In Many Industries
- Global Recognition
- Secure and Flexible
- 50+ Case Studies
- 50+ Projects



# TOPICS OF Post Graduate Certification Program in DATA SCIENCE











**AWS** 

## **PYTHON**

#### 1. Introduction to Python

- History of Python
- Why to learn python
- How is Python Different?
- Installing Python

#### 2. Python Interpreter

- Using the interpreter
- Integrated Development Environments (IDE) How to run Python programs?

#### 3. Basics of Python

- Variable
- Keywords
- Statements & Comments
- Indentation
- Data types

- Static Typing vs Dynamic Typing
- Input and output
- Operators Arithmetic operator Relational Operator Assignment Operator
- Logical operator Bitwise operator Membership Operator
- Identity Operator

#### 4. Control Flow

- If statement
- If else
- If elif -else
- Nested if-else
- while loop
- for in loop
- Nested for loop
- Nester while loop
- Loop with else
- Pass statement
- Break and continue

#### 5. Functions

- Basics Defining function
- function call Return statement
- Function with parameter and without parameter
- Function parameters Call by value or call by reference local and global variable
- Recursion, Anonymous (lambda) function
- User define functions
- Examples

#### 6. Modules

- Defining module
- How to create a module
- Importing module
- Dir()
- Module search path
- Reloading a module
- Sys module
- Os module
- namespace

#### 7. Package

- Defining package
- How to create the package
- Importing package
- Installing third party packages

#### 8. Numeric Types

- Numeric type basics
- Hexadecimal, Octal, and Binary Notation Complex Numbers
- Typecasting Numeric Functions
- Random number generation(Using Random Modules)

#### String

- Defining a string
- Different ways to create string Accessing elements of the string Escape sequence
- Raw string String methods String formatting Expressions

#### **10. List**

- Defining a list
- Creating list
- Accessing list elements of list
- Deleting list
- List methods
- Functions used with list
- List comprehension
- Implementation of stack and queue using list
- Use of Zip ()
- Matrix operations using list

#### 11. Tuple

- Defining a tuple
- Creating a tuple
- Accessing elements of the tuple
- What is Immutability
- List vs tuples
- Tuple Methods Functions used with tuple
- Advantage of Tuple

#### 12. Dictionary

- Defining a dictionary
- Creating a dictionary
- Accessing elements of the dictionary
- Deleting a dictionary
- Dictionary methods
- Dictionary Comprehension

#### 13. Set

- Defining a set
- Creating set
- Set operations
- Set methods
- Set comprehension

#### 14. Files

- Defining a file
- Types of file operations
- Opening a File
- Closing file
- File modes

- File attributes
- Writing to file
- Reading from file
- Appending to file
- File positions
- Binary file
- Pickle module

#### 15. Exception Handling

- Defining an exception?
- Default exception handler
- Exception handling techniques
- a. Detecting Exception (try)
- b. Catching exceptions (catch)
- c. Catching multiple exceptions
- d. Raising exception (raise) Finally block
- User-defined exceptions

## 16. Object-Oriented Programming OOPS concepts Defining

#### **Class Creating object**

- Method vs function Calling methods
- Instance attribute vs class attribute
- Instance method vs class method
- Private attribute and method Static Method
- Method Overloading Constructor
- Method Overriding Constructor
- List of objects Inheritance
- Examples

#### 17. Multi-Threading

- Process-based multitasking
- Thread based multitasking
- Creating a Thread without using class
- Creating thread using class
- Sleep() method
- Join() method Getting and setting the name of the Thread Logging module
- Synchronization
- Lock concept
- Object-Oriented

- Inter thread communication
- Is\_Alive() method
- Active\_count() method
- Enumerate() method
- Current\_thread() method
- Daemon Thread

#### 18. GUI Programming with Tkinter

- Introduction to Tkinter
- Creating a window Tkinter widgets Label
- Button Entry Messagebox List
- Radio Button CheckButton Creating Frame
- Creating Menu Assignments on Tkinter
- Examples

#### 19. Event Handling

- Defining an event
- Bind() method
- Mousse events
- Keyboard events
- Examples

#### 20. Data Base Programming

- Introduction to MySQL.connector module, Connecting to the database by using MySQL, Creating a table by MySQL
- Performing SQL operations, Introduction to mysql, Installing mysql, Creating database using mysql
- Connecting MySQL database from python, Creating a table, Performing
- SQL operations
- Examples

#### 21. Networking

- Introduction to Network programming, Ip address, Port NumberSocketmodule,
   Server socket, Client socket, Socket methods, TCP socket, UDP socket
- Create server-client examples

#### 22. Conversion of Python script to executable file

Defining an executable file, Deploying the application

#### 23. LIVE PROJECTS

 Create GUI and store data in the Database. (5-day session) Create a server-client program. (using TCP)

**And Many More...** 

## MACHINE LEARNING

#### 1. Introduction to Machine Learning

- Introduction to Machine Learning
- Types of Machine learning
- Data understanding: real-life example
- Application of Machine Learning
- Discussion on different packages used for ML
- Related concepts: Splitting the dataset into train set and test set
- Practical knowledge of the algorithm on Python

#### 2. Introduction of Statistics

- Descriptive statistics: Measure of Central Tendency, Measure of Dispersion, Measure of Shape
- Probability and sampling: Conditional probability, Bayes theorem
- Probability Distribution
- Hypothesis Test

#### 3. Packages of Machine Learning

- Numpy
- Pandas
- Matplotlib
- Seaborn

#### 4. Exploratoy Data Analysis

- Introduction to Graphs
- Description about data
- Visualisation
- Data cleaning

#### 5. Data prepressing

- Scaling
- Normalization
- Standardization

#### 6. Regression Techniques

- Linear Regression Technique
- Dataset with problem description
- Non- Linear Regression Techniques
- Logistic Regression Technique

#### 7. K-Nearest neighbours

- K-Nearest Neighbors
- Concept and theory
- Distance functions: Euclidean, Minkowski
- Why should we use KNN?
- Mathematical approach
- Dataset with problem description
- Practical application on Python

#### 8. Support Vector Machine

- Support Vector machine
- Introduction to Support Vector Machine
- Mathematical Approach
- Theory on hyperplane
- Dataset with problem description
- Practical application on Python

#### 9. Decision Tree

- Introduction to Decision Tree
- Significance of using Decision Tree
- Different kinds of Decision Tree
- Procedure and technique of Decision Tree
- Practical application of Decision Tree on Python

#### 10. Random Forest

- Random Forest
- Theory and mathematical concepts
- Entropy and Decision Tree
- Dataset with problem description
- Classification using random forest on Python

#### 11. Naive Bayes

- Introduction of Naïve Bayes
- Theory of classification
- Concept of probability: prior and posterior
- Bayes Theorem
- Mathematical concepts
- Limitation of Naïve Bayes
- Dataset with problem description
- Practical application on Python

#### 12. Clustering

- Introduction of clustering
- K-mean clustering
- Hierarchical Clustering
- Dataset with problem description
- Practical application on Python

#### 13. Gradient Descent

- Gradient descent
- Stochastic GradientDescent
- Gradient boosting
- Types of boosting
- Bootstrapping
- Practical application on Python

#### 14. Dimensionality Reduction Techniques

- Linear Discriminant Analysis (LDA)
- Principal component Analysis (PCA)
- Business case study

#### **15. Time Series Analysis**

- Introduction to time series
- Components of Time Series: Trend, Seasonal, Cyclical
- Types of Forecasting methods: Autoregressive Model, Moving Average Model,
   Autoregressive Integrated Moving Average Model, Seasonal Autoregressive Integrated
   Moving Average Model
- Practical application on Python

## **ARTIFICIAL INTELLIGENCE**

#### 1. Introduction

- Introduction to Artificial Intelligence
- Applications of Artificial Intelligence
- Keras
- Tensorflow

#### 2. Deep Learning

Introduction to Deep Learning
Application of Deep Learning
Types of Deep Learning Algorithms: ANN, RNN, CNN

#### 3. Artificial Neural Network

- Plan of attack
- Activation function
- Gradient descent
- Stochastic Gradient Descent

- Backpropagation
- Practical approach with python

#### 4. Recurrent Neural Network

- Introduction of Recurrent Neural Network
- Application of RNN
- Simple RNN
- GRU
- LSTM
- Practical approach with python

#### 5. Convolution Neural Network

- Introduction of Convolution Neural Network
- Plan of attack
- Convolution Operation
- ReLU layers
- Pooling
- Flattening
- Different layers
- Practical approach using python

#### 6. Reinforcement Learning

- Agent environment problem
- Reinforcement process
- Q-learning
- Practical approach with python

#### 7. Natural Language Processing

- Introduction of NLP
- NLTK
- Application of Natural Language Processing
- Regular expression
- Feature Extraction
- Text mining
- Phases of NLP
- NLTK: Tokenizer, CountVectorizer
- Sentiment Analysis
- Practical approach with python

#### 8. Image Processing & Computer vision

- Introduction of computer vision
- Application of Computer Vision
- What is OpenCV
- Image Processing with OpenCV
- Image Detection with OpenCV
- Practical approach with python



Oracle SQL 12C :- Exam code: 1Z0-061

#### **Introduction to Oracle Database**

- List the features of Oracle Database 12c
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course
- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

#### **Retrieve Data using the SQL SELECT Statement**

- List the capabilities of SQL SELECT statements
- Generate a report of data from the output of a basic SELECT statement
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Learn the DESCRIBE command to display the table structure
- Understand Operator Precedence

#### **Learn to Restrict and Sort Data**

- Write queries that contain a WHERE clause to limit the output retrieved List
- the comparison operators and logical operators that are used in a WHERE clause
- Describe the rules of precedence for comparison and logical operators Use
- character string literals in the WHERE clause
- Write queries that contain an ORDER BY clause to sort the output of a SELECT statement
- Sort output in descending and ascending order

#### **Usage of Single-Row Functions to Customize Output**

- Describe the differences between single row and multiple row functions
- Manipulate strings with character function in the SELECT and WHERE clauses
- Manipulate numbers with the ROUND, TRUNC, and MOD functions
- Perform arithmetic with date data
- Manipulate dates with the DATE functions

#### **Invoke Conversion Functions and Conditional Expressions**

- Describe implicit and explicit data type conversion
- Use the TO\_CHAR, TO\_NUMBER, and TO\_DATE conversion functions
- Nest multiple functions
- Apply the NVL, NULLIF, and COALESCE functions to data
- Use conditional IF THEN ELSE logic in a SELECT statement\_

#### **Aggregate Data Using the Group Functions**

- Use the aggregation functions in SELECT statements to produce meaningful reports
- Divide the data into groups by using the GROUP BY clause
- Exclude groups of data by using the HAVING clause

#### **Display Data From Multiple Tables Using Joins**

- Create a simple and complex view
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

#### **Use Subqueries to Solve Queries**

- Describe the types of problem that sub-queries can solve
- Define sub-queries
- List the types of sub-queries
- Write single-row and multiple-row sub-queries

#### **The SET Operators**

- Describe the SET operators
- Use a SET operator to combine multiple queries into a single query
- Control the order of rows returned

#### **Data Manipulation Statements**

- Describe each DML statement
- Insert rows into a table
- Change rows in a table by the UPDATE statement
- Delete rows from a table with the DELETE statement.
- Save and discard changes with the COMMIT and ROLLBACK statements
- Explain read consistency

#### **Use of DDL Statements to Create and Manage Tables**

- Categorize the main database objects
- Review the table structure
- List the data types available for columns
- Create a simple table
- Decipher how constraints can be created at table creation
- Describe how schema objects work

#### **Other Schema Objects**

- Create a simple and complex view
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

#### **Control User Access**

- Differentiate system privileges from object privileges
- Create Users
- Grant System Privileges
- Create and Grant Privileges to a Role
- Change Your Password
- Grant Object Privileges
- How to pass on privileges?
- Revoke Object Privileges

#### **Management of Schema Object**

- Add, Modify and Drop a Column
- Add, Drop and Defer a Constraint
- How to enable and disable a Constraint?
- Create and Remove Indexes
- Create a Function-Based Index
- Perform Flashback Operations
- Create an External Table by Using ORACLE\_LOADER and by Using

#### ORACLE\_DATAPUMP

Query External Tables

#### **Manage Objects with Data Dictionary Views**

- Explain the data dictionary
- Use the Dictionary Views
- USER\_OBJECTS and ALL\_OBJECTS Views
- Table and Column Information
- Query the dictionary views for constraint information
- Query the dictionary views for view, sequence, index, and synonym information
- Add a comment to a table

#### **Manipulate Large Data Sets**

- Use Subqueries to Manipulate Data
- Retrieve Data Using a Subquery as Source
- Insert Using a Subquery as a Target
- Usage of the WITH CHECK OPTION Keyword on DML Statements
- List the types of Multi-table INSERT Statements
- Use Multi-table INSERT Statements
- Merge rows in a table
- Track Changes in Data over a period of time

#### **Retrieve Data Using Sub-queries**

- Multiple-Column Subqueries
- airwise and No pairwise Comparison
- Scalar Subquery Expressions
- Solve problems with Correlated Subqueries
- Update and Delete Rows Using Correlated Subqueries
- The EXISTS and NOT EXISTS operators
- Invoke the WITH clause
- The Recursive WITH clause

#### **Regular Expression Support**

- Use the Regular Expressions Functions and Conditions in SQL
- Use Meta Characters with Regular Expressions
- Perform a Basic Search using the REGEXP\_LIKE function
- Find patterns using the REGEXP\_INSTR function
- Extract Substrings using the REGEXP\_SUBSTR function
- Replace Patterns Using the REGEXP\_REPLACE function
- Usage of Sub-Expressions with Regular Expression Support
- Implement the REGEXP\_COUNT function

#### And Many More...



#### 1. Introduction to AWS

- What Is Cloud Computing?
- AWS Fundamentals
- AWS Cloud Computing Platform

#### 2. Amazon Simple Storage Service (Amazon S3) and Amazon Glacier Storage

- Introduction
- Object Storage versus Traditional Block and File Storage Amazon
- Simple Storage Service (Amazon S3) Basics Buckets
- Amazon S3 Advanced Features
- Amazon Glacier
- Summary

#### 3. AWS Identity and Access Management (IAM)

- Principals
- Authentication
- Authorization Other
- Key Features
- Summary

#### 4. Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Elastic Block

- Store (Amazon EBS)
- Introduction
- Amazon Elastic Compute Cloud (Amazon EC2)
- Amazon Elastic Block Store (Amazon EBS)
- Summary

#### 5. Amazon Virtual Private Cloud (Amazon VPC)

- Introduction
- Amazon Virtual Private Cloud (Amazon VPC)
- Subnets
- Route Tables
- Internet Gateways
- Dynamic Host Configuration Protocol (DHCP) Option Sets
- Elastic IP Addresses (EIPs)
- Elastic Network Interfaces (ENIs)
- Endpoints
- Peering Security Groups
- Network Access Control Lists (ACLs)

#### 6. Network Address Translation (NAT) Instances and NAT Gateways

- Virtual Private Gateways (VPGs),
- Customer Gateways (CGWs), and
- Virtual Private
- Networks (VPNs)
- Summary

#### 7. Elastic Load Balancing, Amazon CloudWatch, and Auto Scaling

- Introduction
- Elastic Load Balancing,
- Application Load Balancing
- Amazon CloudWatch
- Auto Scaling
- Summary

#### 8. Databases and AWS

- Database Primer
- Amazon Relational Database Service (Amazon RDS)
- Amazon Redshift
- Amazon DynamoDB
- Summary

#### 9. SQS, SWF, and SNS

- Amazon Simple Queue Service (Amazon SQS)
- Amazon Simple Workflow Service (Amazon SWF)
- Amazon Simple Notification Service (Amazon SNS)
- Summary

#### 10. Domain Name System (DNS) and Amazon Route 53

- Domain Name System (DNS)
- Amazon Route 53 Overview
- Summary

#### 11. Amazon ElastiCache

- Introduction
- In-Memory Caching
- Amazon ElastiCache
- Summary

#### **12.** Additional Key Services

- Introduction
- Aws Lambda
- Aws Cloud Front
- Redshift
- Kinesis
- ECS
- Directory Services
- Storage and Content Delivery
- Security
- DevOps

#### 13. Security on AWS

- Introduction
- Shared Responsibility Model
- AWS Compliance Program

#### **And Many More...**

# SKILLS DEVELOPED BY DATA SCIENTIST

- Critical Thinking
- Coding
- Mathematics
- Communication
- Problem Solving
- Risk Analysis

And Many More...



## WHO CAN LEARN?

- Anyone who wants to build a career in Data Science
- Anyone who wish to gain knowledge about Programming Students
- who are currently in college or university



## CAREER OPPORTUNITIES

- Data Scientist
- Machine Learning Engineer
- Machine Learning Scientist
- Application Architect
- Enterprise Architect
- Data Architect
- Business Intelligence Developer

**And Many More...** 



## **OUR RECRUITERS**



















































and Many More....

## PROCESS FOR SUCCESS

**GET PLACED** 

**GET TRAINED** 

**ENROLL** 



## FACILITIES OFFERED

- Practical Training on Live Projects
- Complete Placement Assistance
- Interview Preparation
- Global Certification
- Fully functional labs
- Online / Offline Training
- Study Materials
- Expert Level Industry Recognized Training





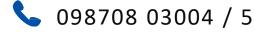
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