

PG Diploma in Data Science & Analytics

About QuickXpert Infotech

QuickXpert Infotech provides professional training on some of the most updated, industry-designed certification & job-oriented training programs to both students & corporate from experts in both classroom & online training format. Our wide range of courses blended by our placement assistance process have helped our students from both IT & non-IT fields to make career in IT Industry.

Overall 30+ Courses - 700+ Companies - 1000s Trained!

Courses Offered - SAP, JAVA, Dot Net, Software Testing, Web Development, Oracle, Digital Marketing, Python, Data Science & A.I., Salesforce, Tableau, Power BI, Android, Hybrid Apps, R, Hadoop etc. please visit website for details.

Our Live Projects - BiodataKing, TeriMeriChoice, theVibrantBirdie etc.

About the Course

Background - Every Big Companies are sitting on huge amount of data which need to be analyzez to extract meaningful insights out of it which will eventually help in growth and expansion of company. So Here Data Scientist come in picture to perform data analysis. So Basically Data Science is a Umbrella term that houses multiple nodes like Data Analysis, Data Mining, Data Cleaning, Data Analytic, Data Visualization, Predictive Analysis etc.. Statistics, Machine Learning, Neural Networks, A.I. etc provides required implementations to implement Data Science in a Company. *Hence in this training program you will learn all above to become a Professional Data Scientist !*

Who Can Learn?

Fresher or Experience interested looking to make career in Data Science or from Physics & Statistics background or looking for new career opportunities

Any Pre-requisites?

None! As we teach from scratch to advanced modules.

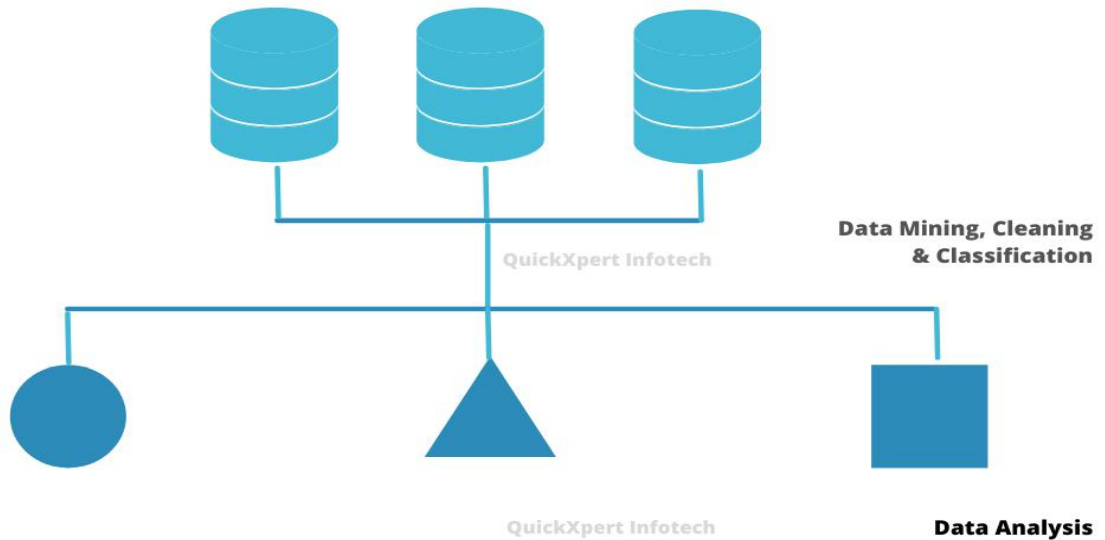
Duration

6 months

Enroll in our PG Program > Get FLOODED With Job Opportunities !

Free Demo / Free Lecture / Customized Training Program Available.

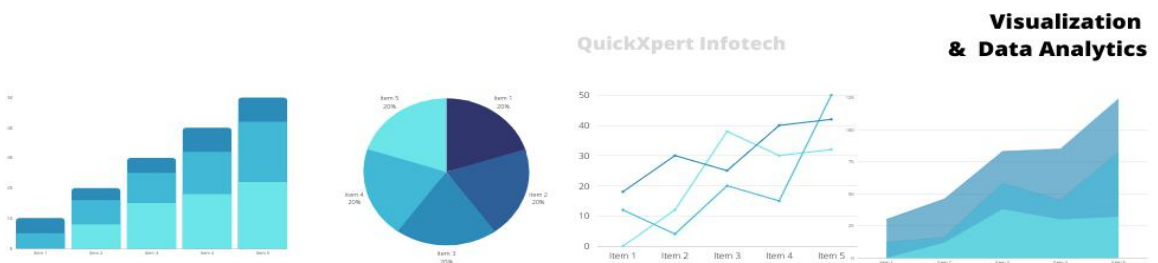
Sample Data Science Application



**DATA
SCIENCE**



**Machine
Learning**



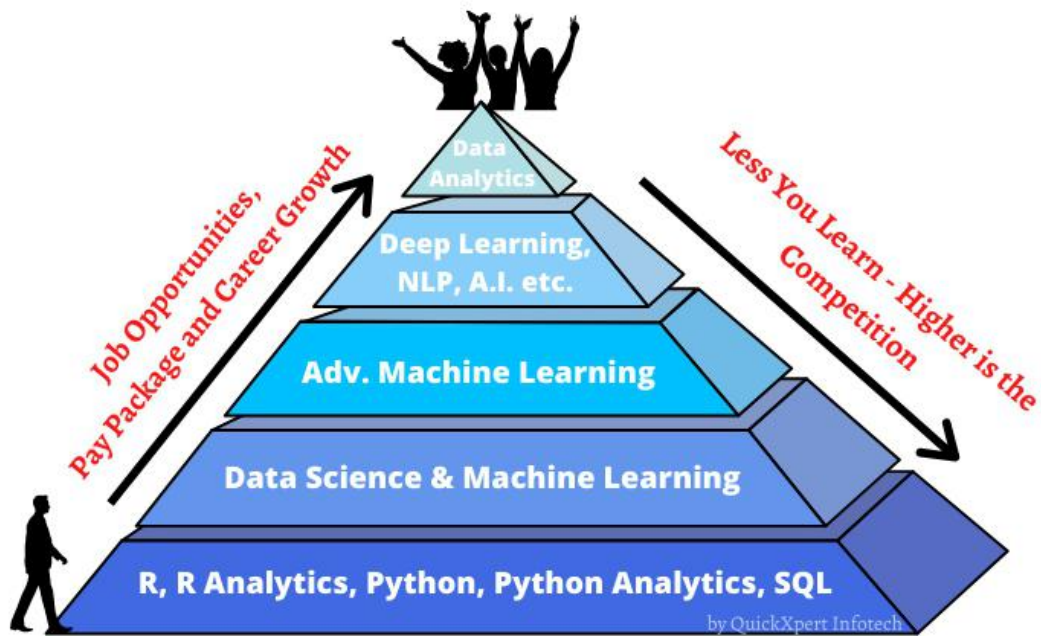
You Will Learn All Above !
10+ Projects, 6+ Industries Covered !

Tools You Will Learn



Job Opportunities

- ❖ As per Latest Industry & Job Trends. Can Check on Naukri.com



About Our PG Program

Course Breakup

- ❖ SQL - 2.5 weeks
- ❖ R Programming, Visualization & Analytics. - 3 weeks
- ❖ Python Programming, Python Analytics & Python Visualization - 1 month 1 week
- ❖ Tableau (1 of industry leader tools) & Data Visualization - 1 month
- ❖ Data Science, ML, Adv. ML, Deep Learning & AI on Python with Data Analysis Exports on Tableau - 2.5 to 3 months
- ❖ PG Program - All Above - 6 to 6.5 months
- ❖ Projects Covered - 15+ | Industries Covered - 6+
- ❖ If time permits Excel Analytics will be taught free

Course Overview

❖ Introduction to Data Science & Machine Learning

- Core Skills
- Industries & Domain
- Need
- Data Science Project (DSP) Life Cycle
- Descriptive | Diagnostic | Predictive | Prescriptive Analytics

MySQL

❖ Installation & Configuration

❖ Using Professional Tool - MySQL Workbench

❖ Design Database

- Create Tables
- Implementing Foreign Keys
- Using Auto Increment

❖ Constraints

- Foreign Keys & index
- Primary key & index
- Unique key & index
- Not null constraint

❖ Index

❖ CRUD Operations

- Insert
- Update
- Delete

❖ **Select Queries**

- Basic Queries
- Using AND conditions
- Using OR conditions
- Using in, between, distinct and like keywords
- Sorting in ascending and descending order

❖ **Functions**

- Basic functions like lower case, upper case etc.
- Complex functions like position, left and ifnull

❖ **Groups**

- Basic Queries
- Using Having Clause
- Multi column groups

❖ **Joins**

- Creating Foreign Keys and use them in Joins
- Inner Join or Natural Join
- Left Outer Join
- Right Outer Join
- Full Outer Joins
- Complex Join Queries etc

❖ **Views**

❖ **Subquery**

❖ **Create Complex Queries**

- Using Joins, Groups, Views & Subquery all together
- Creating tables using queries
- Inserting, Update & Delete using Select Queries

❖ **Data Export & Import**

❖ **Creating Professional ER Diagram in MySQL**

Tableau

❖ Introduction to Tableau

- Architecture
- Data Model
- Data Connection with single data sources
- Data Joins
- Working with multiple data sources
- Data Blending
- Difference between joining and blending data

❖ Tableau Interface

- Measures and dimension
- Shelves
- Show me
- Data Types
- Default Properties
- Marks Card
- Page Shelf
- Saving and sharing your work-overview
- Difference between .twb and .twbx
- Discrete vs Continuous

❖ Date Aggregations and Date parts

- Cross tab
- Totals & Subtotals

❖ Chart Types (Visualization)

- Bar Charts & Stacked Bars
- Pie Chart
- Line Graph with Date
- Line Graph without Date
- Area charts
- Tree Map

- Word Cloud
- Packed Bubble
- Box & Whiskers Plot
- Scatter Plots
- Highlight tables
- Heat maps

❖ **Advanced Visualization**

- Geographical fields
- Map options

❖ **Run Time Columns**

- Calculated Fields
- String Calculation
- Data Calculation
- Logical Calculation
- Numeric Calculation
- Parameters
- Table Calculations
- Level of detail

❖ **Data Formatting**

- Legends
- Highlights
- Labelling
- Number Formats
- Alignment

❖ **Advanced Functionalities**

- Sorting
- Groups
- Sets
- Hierarchy
- Reference and Trend Lines
- Edit Axis
- Bins

❖ Filters

- Dimension Filter
- Measure Filter
- Filter - Display Option
- Context Filters
- Relevant Filters
- Sets in filters
- Conditional Filters

❖ Advanced Charts

- Pareto
- Waterfall
- Funnel
- Waffle Chart

❖ Dashboards

- Dashboard Objects
- Dashboard Actions
- URL
- Highlight
- Filter
- Advanced Interactivity
- Publish to Web

❖ Case Studies / Project

- Data Visualization & Analytics
 - Data Sources
 - from SQL (MySQL)
 - from Flat Files (CSV / Excel etc.)
 - from Python (revisit after python)
 - from Data Science & M.L. (revisit after data science)

R Programming & Analytics

❖ Installation & Configuration

❖ Programming Basics

- Variables
- Scalars
- Vectors
- Matrix
- List
- Data Frames
- Using c, Cbind, Rbind, attach and detach functions in R
- Factors
- Using R Operators

❖ Decision Making

- If ...Elseif...Else conditions
- While Loop
- For Loop
- Apply()
- sApply()
- rApply()
- tApply etc

❖ Importing / Exporting Data

- Reading Tabular Data files
- Reading CSV files
- Importing data from excel
- R Assignment Operators
- Saving in R data
- Loading R data objects
- Writing to files

❖ **Manipulating Data**

- Selecting rows/observations
- Selecting columns/fields
- Merging data
- Relabelling the column names
- Converting variable types
- Data sorting
- Data aggregation
- dplyr

❖ **R functions**

- Arithmetic
- Mathematical
- Summary
- String

❖ **Data Visualization & GG Plots**

- Box Plot
- Histograms
- Scatter Plotter
- Line chart
- Bar Chart
- Heat maps

❖ **Statistical Functions**

- Mean, Median and Mode
- Correlation
- Variance and Standard deviation
- Normal Distribution

❖ **Predictive Modelling / Analytics (Case Study)**

- Linear Regression
- Logistics Regression

Python

❖ Python Programming

- Installing Anaconda & Python v3 | Git Bash
- Basics - variables, constants etc.
- Python Programming - If..else, while loop, for loops etc.
- Logic Building Sessions
- Functions
- Classes
- OOPs
- Collections
 - List
 - Dictionary
 - Tuple
 - Array
 - Set
- Exception Handling
- SQL Database Integration
- File IO

❖ Data Analytics in Python

- Installing & Understanding Analytics Packages
- **NumPy** Array Operations
- **Pandas** Data Frame Operations
- Data Acquisition (Import & Export)
- Indexing
- Selection
- Sorting
- Filtering
- Group By
- Binning
- Concatenation
- Merge
- Append
- Drop

❖ Data Visualization in Python

- Installing Librarires
 - Matplotlib
 - Seaborn
- Charts & Plots
 - Histogram
 - Scatter Plots
 - Box Plots
 - Line Chart
 - Bar Chart
 - Pie Chart etc.
- Dashboards
- Project
- How to use DJango (Python MVC Framework) to publish Python Analytics & Visualization results on web.

Data Science & Adv. Machine Learning

❖ Statistics & Exploratory Data Analysis (EDA)

- Descriptive Statistics
- Measure of Central Tendency
- Dispersion
- Probability Distribution
- Correlation & Covariance
- Data Wrangling (Munging)
- Outliers | Missing Values
- Sparsity
- Inferential Statistics
- Random Sampling
- Hypothesis Testing

❖ Time Series Forecasting

- Time Series Data
- Trend Chart
- Stationarity
- Seasonality
- Moving Average
- Exponential Smoothing
- ARIMA
- GARCH

❖ Supervised Learning

- Installation & Use of **Scikit-Learn** package
- Linear Regression
- Multi-Linear Regression
- Stepwise Regression
- Logistic Regression
- Sigmoid Function
- Entropy
- Information Gain
- Gini Index
- Decision Tree (CART)
- Ensemble Learning
- Random Forest
- xgBoost
- K-Nearest Neighbors (KNN)
- K Selection
- Distance Metrics
- Support Vector Machine (SVM)
- Kernel Functions
- Naive Bayes Classifier (NBC)
- Perceptron Learning
- Multi-Layer Perceptron (MLP)

❖ Unsupervised Learning

- Hierarchical Clustering
- Dendrograms
- Centroid Based Clustering
- K Means Clustering
- Association Rule Mining
- Recommendation Engine

❖ Model Improvement & Validation

- Regularization
- Lasso
- Ridge
- ElasticNet
- Cross Validation
- Confusion Matrix
- ROC Curve
- Overfitting
- Underfitting Problems
- Precision vs Recall
- F1 Score - Type I vs Type II Error
- Ensemble Modeling (Bagging | Boosting | Stacking)
- Feature Selection & Feature Extraction
- Dimensionality Reduction
- Principal Component Analysis (PCA)
- Multi class Classification
- Linear Discriminant Analysis (LDA)
- Scree Plot
- Elbow Method

❖ When to Use Which Algorithms with Projects & Case Studies

❖ Projects / Case Studies

- Real Estate Price Prediction
- Fraud Detection Problem in BFSI domain
- Disease Detection in Healthcare domain
- Market Segmentation in Advertising Sector
- Market Basket Analysis in Departmental Sector
- Passenger Forecasting in Aviation Sector
- News Classification in Media Sector
- Dashboard Visualization on Tableau

Deep Learning & A.I.

❖ Introduction to AI & Neural Networks

- Deep Learning vs Machine Learning
- Tech Advancement
- All about Artificial Neural Networks (ANN)
- Understand How Deep Neural Network Works?
- Different variants of Gradient Descent
- Stochastic Gradient Descent vs Adam vs Others
- Hyper parameter Tuning
- Batch Size
- Learning Rate
- Momentum

❖ Deep Learning in Python

- Deep Learning packages in python
- Google **TensorFlow** Framework
- Model Building with default TFLearn API
- Keras Vs TFLearn Vs Pycharm APIs
- Model Building with **Keras** API Wrapper

- Activations | Optimizers | Losses
- Validation | Evaluation Metrics | Keras Backend
- Callbacks - Early Stopping, TensorBoard

❖ CNN - Convolutional Neural Networks

- Understanding Architecture & Visualizing a CNN
- Kernel
- Depth
- Pooling

❖ RNN - Recurrent Neural Networks

- Recurrent Neural Network Model
- Training RNNs with Back-propagation
- Long Short-Term Memory (LSTM)
- Gated Recurrent Unit (GRU)

❖ Natural Language Processing (NLP)

- Understanding Text Mining & Analytics
- Tokenization
- Stop Word Removal
- Stemming
- Lexical Analysis

❖ Projects / Case Studies

- Image Recognition using MNIST Dataset
- Object Recognition using CIFAR-10 Dataset
- Speech Recognition (Google Voice | Alexa | Siri)
- Sentiment Analysis and Word Clouds
- Chat Bot Building

Interview Preparation

- Throughout training program + At the end Mock Interviews
- Resume Preparation

HR Introduction & Placement Process

- Introduction to HR
- To Save Time, Placement Process will start from 5th month to help you quickly land in IT Jobs even while you are Learning !
- Simple Equation :: More You Learn (Related Technologies) >> Less Competition >> Be Unique >> Help in Quick Jobs
- Hence Our PG program is designed as per industry trends. Check Both on Naukri Portal or Pyramid Diagram in the PDF.

Other Benefits

- ❖ **Training from Experts**
- ❖ **Installments Available**
- ❖ **Job Oriented Course**
- ❖ **80% Practicals** - Learn from Scratch
- ❖ **Professional Notes & Study Material Provided**
- ❖ **Certification Course**
 - You will get Course Completion ISO Certificate from our Institute
- ❖ **Live Projects / Case Studies Covered**
- ❖ **Dedicated Placement Team**
- ❖ **100% Job Opportunity**
 - Check Recent Placed Students on Site / our FB Page / our Google Page
- ❖ **Personal Mentorship**
 - Limited Seats per batch for Personal Mentorship
- ❖ **Friendly Environment with Professional Grooming**
- ❖ **Interview Preparation & Mock Interviews**
- ❖ **Resume Building etc.**

Please visit site for more info or reach us

Note : Enroll in our PG Program > Get *FLOODED* With Job Opportunities !

Our 5 Steps Process for Success



Contact Us

Contact Info : +91-7506252588, 022-41313888, 022-49693200

Website : www.quickxpertinfotech.com

Inquire Now !

