



Full Stack Data Science Online Training with Capstone Projects as per Data Science Certification Standards..!!





MEET OUR CERTIFIED MENTOR

Mr. SUBBA RAJU KORASEEKA



Mr. Subba Raju Koraseeka has more than 21+ years of experience in the Software Industry as real time employee, trainer and mentor in various reputed organizations worked in various domains and projects. He is a certified professional in Testing, Python and Data Science and leading online trainer in HYDERABAD. He is giving real time

scenarios and live hands on projects development and testing.

Mr. Subba Raju and his team have started Hyderabad's first and dedicated QA Training Hub, which offers end-to-end Testing Training. Aspirants seeking a career in Testing can register for QA Training Hub's Software Testing courses: Manual Testing, Test Automation, Selenium, Database Testing, Protocol Testing, Cloud Testing, Pega Testing.

Mr. Subba Raju and his team of trainers offer world-class, high quality and affordable software testing training courses to aspirants seeking a career in software testing. Together, the team has trained more than 210 batches of trainees on 14 plus technologies. The testing training programs are classroom based, eLearning based and corporate training based on Selenium, Python, Full-stack-Python, Core-Java, Full-stack-Data-Science QA, and Web Technologies.



Mission

To provide flexibility, convenience and competency by offering testing training through, online & corporate training method.

Vision

To offer the best, accessible and affordable testing training programs to IT aspirants and professionals in India, US, Canada, UK, Australia and Arabic countries.

WE AIM TO ACHIEVE?

- ✓ To make testing training and testing education accessible, and affordable to all.
- ✓ To bridge the gap between demand and supply of software testing professionals in the IT industry, India and abroad.
- ✓ To offer the best-in-the-class and affordable software testing training programs.
- ✓ To relay and share the testing knowledge gained by the trainers during their work on testing projects across platforms and software.
- ✓ To create, nurture and strengthen software testing training in India and abroad.
- ✓ To promote discussion and debate on all issues relating to testing, theory and practice.
- ✓ To foster a community of testers, local, national and international for mutual benefit and progress.
- ✓ To seek and publish jobs and opportunities in the domain of software testing and testing training.
- ✓ To establish a benchmark for quality testing training



Full Stack Data Science

Online training with Capstone Projects as per Data Science certification standards..!!

Module 1: DATA SCIENCE

- ✓ What Data Science is
- ✓ Data Science life cycle
- ✓ Why Data Scientists are in demand
- ✓ What is a Data Product?
- ✓ The growing need for Data Science
- ✓ Large Scale Analysis Cost vs Storage
- ✓ Data Science Skills
- ✓ Data Science Use Cases
- ✓ Data Science Project Life Cycle & Stages
- ✓ Data Acquisition
- ✓ Where to source data
- ✓ Techniques
- ✓ Evaluating input data
- ✓ Data formats
- ✓ Data Quantity
- ✓ Data Quality
- ✓ Resolution Techniques
- ✓ Data Transformation
- ✓ File format Conversions



Module 2: Python Core Concepts for Data Science

- ✓ Python Collections
- ✓ Python Functions
- ✓ Python Anonymous / Lambda Function
- ✓ Python Files
- ✓ Object Oriented Programming System
- ✓ Python Regular Expression



Module 3: Introduction to DATABASE

- ✓ What is Database?
- ✓ Types of Databases?
- ✓ What is DBMS?
- ✓ What is RDBMS?
- ✓ History of RDBMS



Module 4: SQL Database

- ✓ MySQL / SQL Server
- ✓ CRUD Operation
- ✓ Select ... Where
- ✓ Insert, Update, Delete
- ✓ Joins, Primary & Foreign Keys
- ✓ Connectivity with Python

Module 5: NoSQL DB

- ✓ What is NoSQL DB
- ✓ Different Between NoSQL DB and SQL DB
- ✓ Features NoSQL Databases
- ✓ Create & Drop Database
- ✓ Create & Drop Collection
- ✓ Data Types
- ✓ Create, Insert, Update, Delete Document



Module 6: PYTHON LIBRARIES for Data Science:

NUMPY

- ✓ What is Numpy
- ✓ History of Numpy
- ✓ What is Ndarray
- ✓ Creating Numpy Array
 - ▶ Array Function



Module 7: Different Ways of Creating NumPy Array

- ✓ Numerical
- ✓ Homogenous Numpy Array
 - ▶ Ones, Zeros
 - ▶ Diagonal, Eye
- ✓ Numpy with Random Numbers
 - ▶ Rand, Randn, Randint



Module 8: Array Attributes

- ✓ Creating Multi-Dimensional Array
- ✓ Extracting Data from Arrays
 - ▶ Using Indexing
 - ▶ Using Slicing
- ✓ Advanced Indexing
 - ▶ Boolean Indexing
 - ▶ Random Indexing
- ✓ Resizing & Reshaping
- ✓ Transpose
- ✓ Vector multiplication
- ✓ Array Attributes
- ✓ Array Operations
- ✓ Broadcasting Rules
- ✓ Insert, Append, Delete, Concatenate
- ✓ Matrix and Algebra Function



PANDAS

History of Pandas

Module 9: Pandas Data Structure

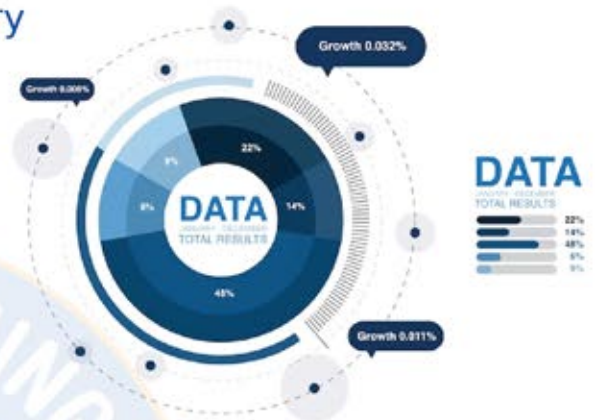
- ✓ Series, DataFrame, Panel

Module 10: Creating Series using...

- ✓ Variables, List, Numpy Array, Dictionary

Module 11: Creating DataFrame...

- ✓ Variable
- ✓ List
- ✓ Numpy Array
- ✓ Dictionary
- ✓ Series



Module 12: Extracting Data from Data Frame

- ✓ Indexing using Column Labels
- ✓ Slicing using Column Labels
- ✓ Indexing using Row Index / Labels
- ✓ Indexing using Row Index
- ✓ Loc
- ✓ iloc

Module 13: Manipulation of Data from Data Frame

- ✓ Inserting New Column / New Rows
- ✓ Changing column labels and index labels
- ✓ Deleting column / rows
- ✓ Re-indexing Options & Customization
- ✓ Indexing & Selecting
- ✓ Date Functionality
- ✓ Identifying and replacing Outliers with NaN
- ✓ Replace NaN using Fillna, interpolate
- ✓ Deleting using Drop, Dropna
- ✓ Concatenate and Merge



Module 14: Matplotlib

- ✓ Matplotlib Intro
- ✓ Matplotlib Get Started
- ✓ Matplotlib Pyplot
- ✓ Matplotlib Plotting
- ✓ Matplotlib Markers
- ✓ Matplotlib Line
- ✓ Matplotlib Labels
- ✓ Matplotlib Grid
- ✓ Matplotlib Subplot
- ✓ Matplotlib Scatter
- ✓ Matplotlib Bars
- ✓ Matplotlib Histograms
- ✓ Matplotlib Pie Charts



Module 15: Seaborn

- ✓ Introduction
- ✓ Environment Setup
- ✓ Importing Datasets and Libraries
- ✓ Figure Aesthetic
- ✓ Color Palette
- ✓ Histogram
- ✓ Kernel Density Estimates
- ✓ Plotting Categorical Data
- ✓ Distribution of Observations
- ✓ Statistical Estimation
- ✓ Plotting Wide Form Data
- ✓ Multi Panel Categorical Plots



Module 16: Data Collection & Processing

- ✓ Where to collect Data
- ✓ How to collect Data
- ✓ Importing Data through Kaggle API
- ✓ Data Wrangling
- ✓ What is Data Cleaning?
- ✓ What is Data Mining
- ✓ Handling Missing Values
- ✓ Data Standardization



Module 17: LINEAR ALGEBRA

- ✓ Scalar, Vector
- ✓ Vector Addition
- ✓ Vector Subtraction
- ✓ Multiplying a vector by a Scalar
- ✓ Dot Product of two Vectors
- ✓ Cross Product of two Vectors
- ✓ Scalar, Vector and Matrix
- ✓ Different types of Matrix
- ✓ Transpose of a Matrix
- ✓ Matrix Addition, Subtraction

Module 18: STATISTICS

- ✓ Basics of Statistics
- ✓ Types of Statistics
- ✓ Population & Sample
- ✓ Central Tendencies
- ✓ Percentiles & Dispersion
- ✓ Statistics implementation with Python-I
- ✓ Range, Sample variance and Standard Deviation
- ✓ Correlation & Causation
- ✓ Hypothesis Testing
- ✓ Statistics implementation with Python-II



Module 19: PROBABILITY

- ✓ What is probability?
- ✓ Importance of Probability in ML
- ✓ Basics of Probability
- ✓ Random Variables
- ✓ Probability Distributions
- ✓ Maximum Likelihood
- ✓ Bayes Theorem
- ✓ Information Theory
- ✓ Cross Entropy
- ✓ Information Gain



Module 20: CALCULUS

- ✓ What Is Calculus?
- ✓ Limits and Differential Calculus
- ✓ Limits and Continuity
- ✓ Evaluating Limits
- ✓ Function Derivatives
- ✓ Continuous Functions
- ✓ Derivatives of Powers and Polynomials
- ✓ Introduction to Multivariate Calculus

Module 21: Exploratory Data Analysis (E.D.A) Outlier Detection

- ✓ Standard Deviation Method
- ✓ Inter Quartile Range Method
- ✓ Z-Score Standardization Method
- ✓ Percentile Method



Module 22: Encoding Techniques

- ✓ Pandas Dummies
- ✓ One Hot Encoding
- ✓ Label Encoding
- ✓ Ordinal Encoding
- ✓ Lambda with Apply Function
- ✓ Numpy with Where Function
- ✓ Map Function



Module 23: Feature Scaling

- ✓ Standardization
- ✓ Normalization

Module 24: Exploratory Data Analysis (E.D.A) Outlier Detection

- ✓ Standard Deviation Method
- ✓ Inter Quartile Range Method
- ✓ Z-Score Standardization Method
- ✓ Percentile Method

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING & DEEP LEARNING using Python

Module 25: Artificial Intelligence

- ✓ What is Artificial Intelligence
- ✓ Father of Artificial Intelligence
- ✓ History of Artificial Intelligence
- ✓ Evolution of Artificial Intelligence over time
- ✓ What is Agent
- ✓ What is Environment
- ✓ Relationship between Agent and Environment
- ✓ Types of Artificial Intelligent
- ✓ Future of Artificial Intelligent

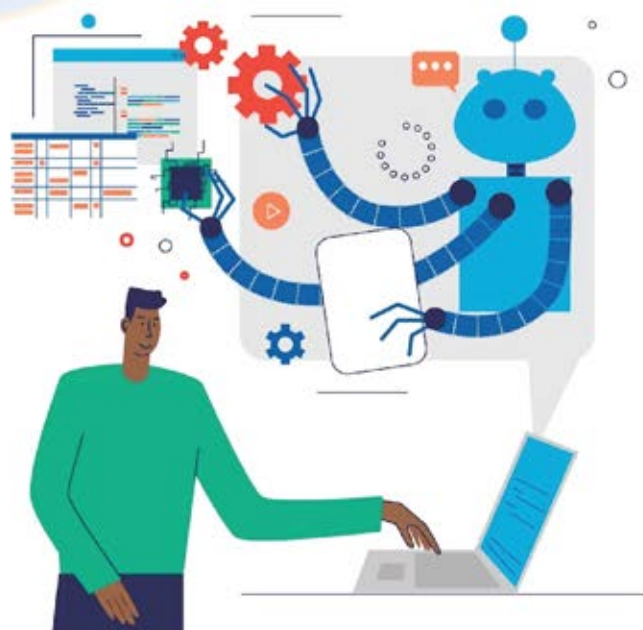


Module 26: Machine Learning

- ✓ Introduction
- ✓ ML Fundamentals
- ✓ ML Common Use Cases
- ✓ Understanding Supervised and Unsupervised Learning Techniques

Module 27: Linear Regression

- ✓ What is Correlation
- ✓ What is Regression
- ✓ What is Linear Regression
- ✓ Linear Regression Overview
- ✓ Simple Linear Regression
- ✓ Multiple Linear Regression
- ✓ Polynomial Regression
- ✓ Related Concepts
 - ▶ Bias
 - ▶ Variance
 - ▶ Bias-Variance Tradeoff
 - ▶ Under Fitting Problem
 - ▶ Over Fitting Problem
- ✓ What is Regularization
- ✓ Types of Regularization
 - ▶ Lasso Regression
 - ▶ Ridge Regression
- ✓ Mathematical Intuition of
 - ▶ Linear Regression
 - ▶ Polynomial Regression
 - ▶ Lasso Regression
 - ▶ Ridge Regression



- ✓ Regression and Error Methods
 - ▶ What is Actual Value?
 - ▶ What is Predicted Value?
 - ▶ What is Residual?
 - ▶ R Squared (R^2)
 - ▶ Mean Squared Error (MSE)
 - ▶ Root Mean Squared Error (RMSE)
 - ▶ Mean Absolute Error (MAE)
- ✓ Multiple Implementation of Logistic Regression using real world data



Module 28: Logistic Regression

- ✓ What is Classification?
- ✓ Use Cases of Classification
- ✓ Difference between Regression and Classification
- ✓ Logistic Regression Overview
- ✓ What is Sigmoid Function?
- ✓ Mathematical Intuition of Logistic regression formula
- ✓ Univariate Analysis
- ✓ Bivariate Analysis
- ✓ Multiple Implementation of Logistic Regression
- ✓ using real world data

Module 29: Decision Tree Classifier

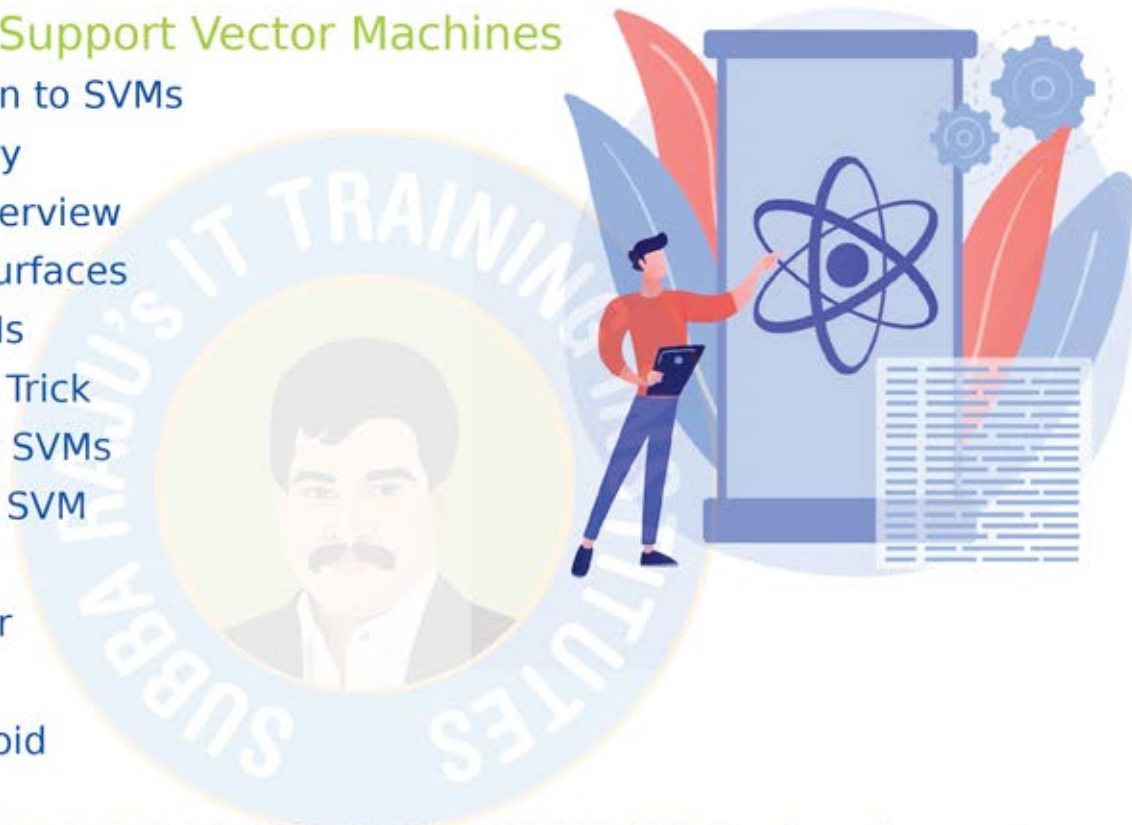
- ✓ What is Decision Tree Algorithm?
- ✓ What is Decision Tree?
- ✓ Terminology of Decision Tree
 - ▶ Root Node
 - ▶ Splitting
 - ▶ Decision Node
 - ▶ Leaf Node
 - ▶ Pruning



- ✓ Sub Algorithm for Decision Tree Induction
 - CART Algorithm
 - ID3 Algorithm
- ✓ What is Gini and Formula Intuition
- ✓ What is Entropy and Formula Intuition
- ✓ What is Information Grain
- ✓ Case study

Module 30: Support Vector Machines

- ✓ Introduction to SVMs
- ✓ SVM History
- ✓ Vectors Overview
- ✓ Decision Surfaces
- ✓ Linear SVMs
- ✓ The Kernel Trick
- ✓ Non-Linear SVMs
- ✓ The Kernel SVM
 - ▶ RBF
 - ▶ Linear
 - ▶ Poly
 - ▶ Sigmoid



Implement CROSS VALIDATION TECHNIQUE to implement SVM algorithm

Module 31: Cross Validation

- ✓ What is Cross Validation?
- ✓ Why we need Cross Validation
- ✓ How it helps to enhance accuracy of algorithm
- ✓ Types of Cross Validation
 - ▶ Leave One Out Cross Validation Method
 - ▶ Hold Out Cross Validation Method
 - ▶ K-Fold Cross Validation Method
 - ▶ Stratified Cross Validation Method



Module 32: Hyperparameter Tuning

- ✓ What is Hyperparameter?
- ✓ What is Hyperparameter tuning?
- ✓ Different Types of Hyperparameter Tuning Methods
 - ▶ Grid Search Hyperparameter Tuning
 - ▶ Random Search Hyperparameter Tuning

Module 33: Naïve Bayes Algorithm

- ✓ What is Probability?
- ✓ What is Conditional Probability?
- ✓ What is Bayes Theorem?
- ✓ What is Naïve Bayes Algorithm?
- ✓ Types of Naïve Bayes Algorithm
 - ▶ Gaussian
 - ▶ Multinomial
 - ▶ Bernoulli
- ✓ Implementation of Naïve Bayes for Text Classification



Module 34: Ensemble Learning

- ✓ Introduction to Ensemble Learning
- ✓ What are Weak Learning?
- ✓ Types of Ensemble Learning
 - ▶ Bagging
 - ▶ Boosting
- ✓ What is Bagging Mechanism?
- ✓ Random Forest
- ✓ Implementation of Random Forest
- ✓ What is Boosting Mechanism?
- ✓ Boosting Algorithms
 - ▶ Ada Boost
 - ▶ Gradient Boost
 - ▶ XG Boost
- ✓ Implementation of
 - ▶ Ada Boost
 - ▶ Gradient Boost
 - ▶ XG Boost



Module 35: Clustering

- ✓ What is Clustering?
- ✓ Types of Clustering Methods
 - ▶ Partitioning Clustering
 - ▶ Hierarchical Clustering
 - ▶ Density Based Clustering
- ✓ What is K-Means Clustering algorithm?
- ✓ Implementation of K-Means Algorithm
- ✓ What is Hierarchical Clustering Algorithm?
- ✓ Implementation of Hierarchical Clustering Algorithm



Module 36: Time Series Analysis

- ✓ Describe Time Series data
- ✓ Format your Time Series data
- ✓ List the different components of Time Series data
- ✓ Discuss different kind of Time Series scenarios
- ✓ Choose the model according to the Time series scenario
- ✓ Implement the model for forecasting
- ✓ Explain working and implementation of ARIMA model
- ✓ Illustrate the working and implementation of different ETS models
- ✓ Forecast the data using the respective model
- ✓ What is Time Series data?
- ✓ Time Series variables
- ✓ Different components of Time Series data

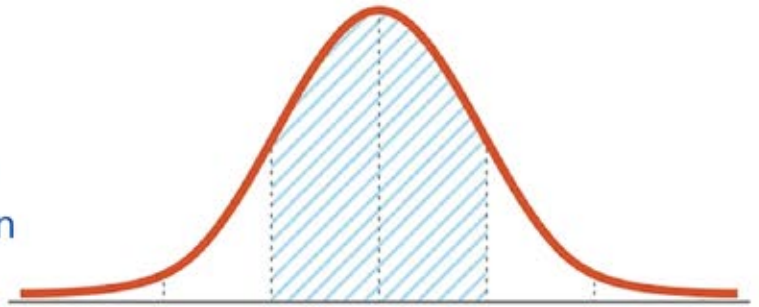


Module 37: Deep Learning

- ✓ What is Deep Learning?
- ✓ Different Between Machine Learning and Deep Learning
- ✓ What is Biological Neural Network?
- ✓ What is Deep Learning Application?
- ✓ What is Artificial Neural Network (ANN)?
- ✓ What is Convolutional Neural Network (CNN)?
- ✓ What is Recurrent Neural Network (RNN)?

Module 38: What is TensorFlow?

- ✓ What are Tensors
- ✓ Tensor Graph
- ✓ TensorFlow Perceptron
 - ▶ Single Layer Perceptron
 - ▶ Hidden Layer Perceptron
 - ▶ Multi-Layer Perceptron



Module 39: What is Keras?

- ✓ Keras Model
 - ▶ Sequential Model
 - ▶ Functional Model
- ✓ Keras Layers
 - ▶ Input Layer
 - ▶ Output Layer
 - ▶ Dense Layer
 - ▶ Flatten Layer
 - ▶ Convolutional Layer
 - ▶ Pooling Layer
 - ▶ Recurrent Layer
 - ▶ Embedding Layer
- ✓ What is Activation Function
- ✓ Types of Activation Function
 - ▶ Linear
 - ▶ Relu
 - ▶ Leaky Relu
 - ▶ Tanh
 - ▶ Sigmoid
 - ▶ Softmax
- ✓ What is Optimizer
- ✓ What is Loss Function



Module 40: Artificial Neural Network

- ✓ The Detailed ANN
- ✓ How do ANNs work & learn
- ✓ Gradient Descent
- ✓ Stochastic Gradient Descent
- ✓ Backpropagation
- ✓ Understand limitations of a Single Perceptron
- ✓ Understand Neural Networks in Detail
- ✓ Understand Backpropagation – Using Neural Network Example
- ✓ MLP Digit-Classifer using Tensor Flow



Module 41: Computer Vision (Using CNN)

- ✓ What is Computer Vision
- ✓ What is Image Processing
- ✓ What is Convolutional Neural Network (CNN)
- ✓ Why CNN
- ✓ Application on CNN
- ✓ Convolutional Neural Network
- ✓ Convolutional Layers
- ✓ Pooling Layers
- ✓ Batch Normalization Layers
- ✓ Dropout Layers

Module 42: Natural Language Processing (NLP) - Chat bots Text Mining

- ✓ What is Natural Language Processing?
- ✓ Tokenization
- ✓ Stemming
- ✓ Lemmatization
- ✓ Stop Words
- ✓ Phrase Matching and Vocabulary



- ✓ Part of Speech Tagging and Named Entity Recognition
- ✓ Introduction to Section on POS and NER
 - ▶ Part of Speech Tagging
- ✓ Named Entity Recognition
- ✓ Sentence Segmentation
- ✓ Sentiment Analysis with NLTK
- ✓ Text Classification

Module 43: Recurrent Neural Network (RNN)

- ✓ LSTM
- ✓ GRU
- ✓ RNN Layers
- ✓ Network Layer
- ✓ Embedded Layer



Module 44: Data visualization tools-POWERBI & TABLEAU

- ✓ Data Visualization in PowerBI
- ✓ Introduction to PowerBI
- ✓ Installation of PowerBI Desktop version
- ✓ Workspace and Data Refresh
- ✓ Expose report to web applications
- ✓ Working with Maps
- ✓ Tables and Matrix
- ✓ Other Charts
- ✓ Cards and Filters
- ✓ Slicers
- ✓ Advanced Charts
- ✓ Objects





Module 45: Interview Preparation**

- > Interview Preparation Introduction & Induction
- > Soft skills during Face to Face and Online / Telephonic Interview
- > Interview Preparation Transition Stories
- > Interview Preparation on Data Science
- > Interview Preparation on Python & R
- > Interview Preparation on Databases
- > Interview Preparation Interview Questions Discussion
- > Resume Preparation
- > Interview based on Resume
- > Interview questions & answers on Machine learning, deep learning, NLP, Computer Vision, Statistics & Other aspects
- > Interview Preparation on Project Discussion
- > Mock Interview based on one project

Our Trainees are successfully placed in



What people say



"He understood my testing training needs, and suggested a custom online training program. The fee was very nominal, when compared to other testing training institutions. I am half way on my completion of the SAP Testing program, and hope to complete the program this Summer end. I sincerely acknowledge the ready-to-help nature of the knowledgeable staff there. I wish the best to Dinesh sir and the staff at QA Training Hub."

Sheetal - Mumbai West, Maharashtra - ★★★★★



"I started Googling for testing trainers in different metros of India. I found QA Training Hub, which is based in Hyderabad. Wonderfully, they were offering online programs in testing tools. I suggested to my daughter to give a try, she did promptly. It was really unexpected for her and me. In the first session itself, which was more in the nature of a demo, her doubts and questions were answered by Dineshji. He and his trainers are the best lot, my daughter says. It is nice that we got a good institution and a knowledgeable teacher to guide my daughter in testing tools. Best wishes to the team at QA Training Hub."

Dr Ravi - New Mogul Apartments, Lucknow (Main) UP - ★★★★★



"We met him at their Hyderabad premises, he noted our testing needs and their critical role in achieving project completion. He made an evaluation of our testing process, and the competencies of our testing staff. He suggested us a custom corporate training program, which was to be held in-house. Dinesh was very kind enough to visit the premises and train our staff in the details of testing tools. Now, our staff is much better than they were before. We wish Dinesh and his team at QA Training Hub the very best in all their testing training endeavours."

Rajesh - Ven Star Solutions Pvt Ltd, Bangalore, Karnataka - ★★★★★

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