



# QA Training Hub (QTH)

Quality Never Fails

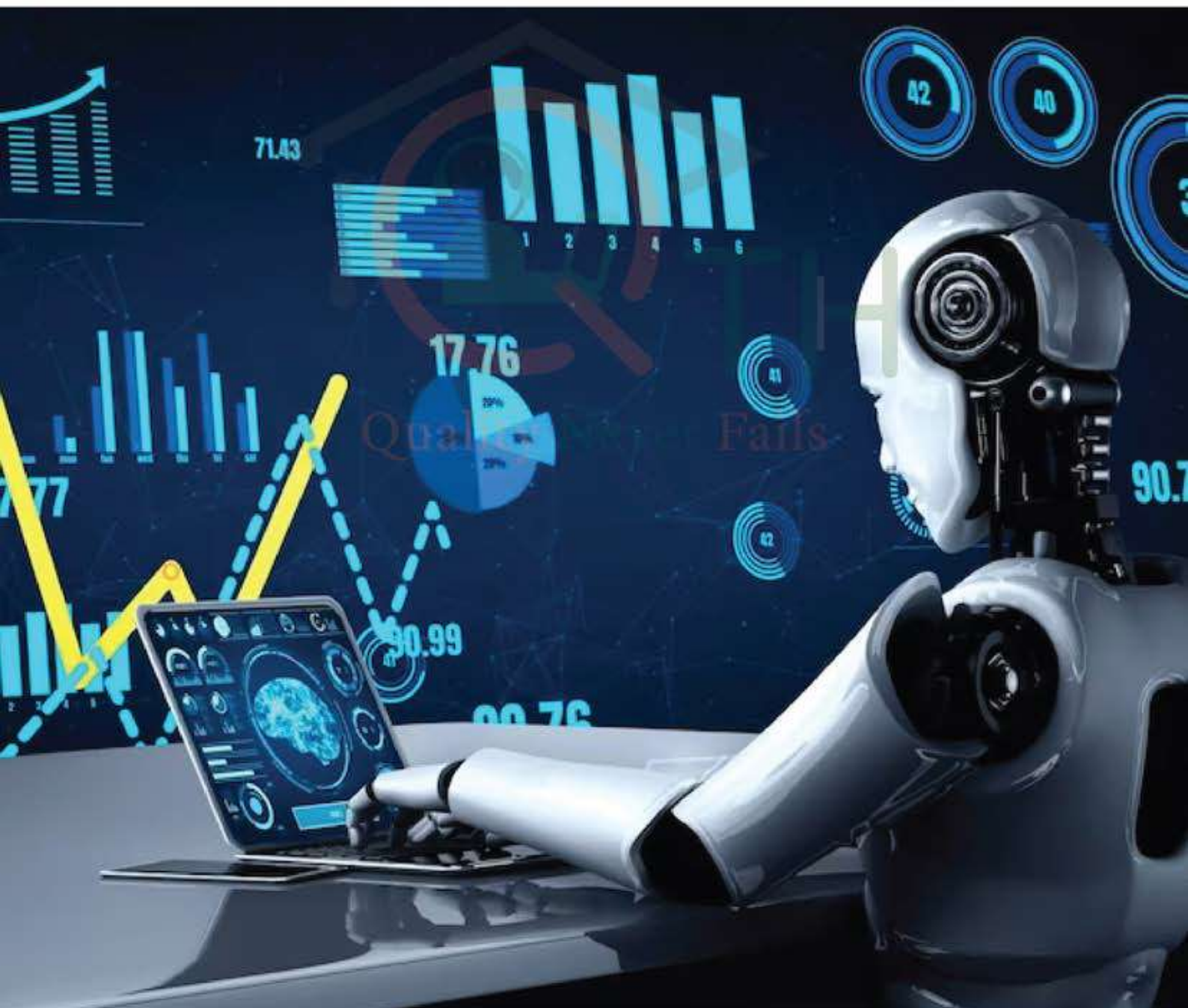


Software Project Automation Testing

(MACHINE LEARNING WITH PYTHON)

Online Training with Banking/  
Insurance/e-Commerce Projects

as per Selenium Certification  
Standards..!!





## MEET OUR CERTIFIED MENTOR SUBBA RAJU KORASEEKA

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.

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. 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

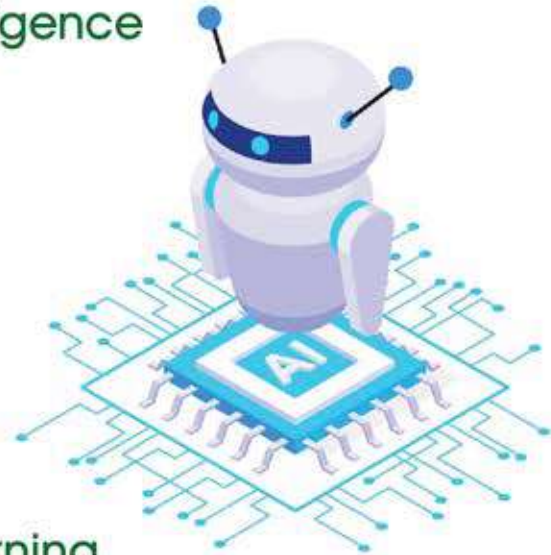
Quality Never Fails



Software Project Automation Testing  
(MACHINE LEARNING WITH PYTHON) Online Training with  
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Projects as per Selenium Certification Standards..!!

### Module 1: Introduction to Artificial Intelligence

- > What is Artificial Intelligence?
- > History of Artificial Intelligence
- > Types of Artificial Intelligence
- > Advantages of AI
- > Limitations of AI
- > Applications of AI
- > AI Programming Languages



### Module 2: Introduction to Machine Learning

- > What is Machine Learning?
- > Why Machine Learning?
- > Features of Machine Learning
- > Applications Of Machine Learning
- > Machine Learning Life Cycle
- > Classification of Machine Learning
- > Top 5 Machine Learning Libraries

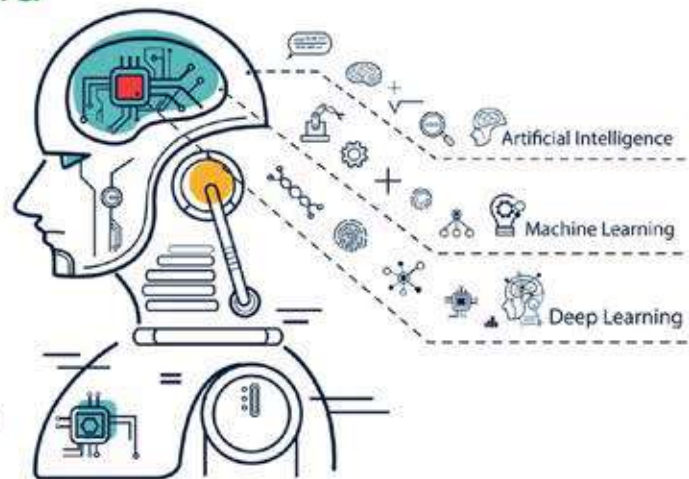
### Module 3: Introduction to Deep Learning

- > What is Deep Learning?
- > Why Deep Learning?
- > Machine Learning vs. Deep Learning
- > Types of Deep Learning Networks
- > Applications of Deep learning
- > Features of Deep Learning
- > Limitations of Deep Learning



## Module 4: Introduction to Big Data

- > What is Big Data?
- > Sources of Big Data
- > 5 V's of Big Data
- > Applications of Big Data
- > The Big Data Lifecycle



## Module 5: Python Fundamentals

- > Python environment setup
- > Python Operators
- > Python Logical Programming using if, else, elif, for, while...!!
- > Lists, Tuples, Strings, Sets, Dict.
- > Functions, Modules
- > OOPs Principles

## Module 6: Advanced Python Ecosystem for ML

- > NumPy
- > Pandas
- > Matplotlib
- > Seaborn
- > Scikit-Learn/SKLearn

## Module 7: Data Collection & Pre-processing (EDA)

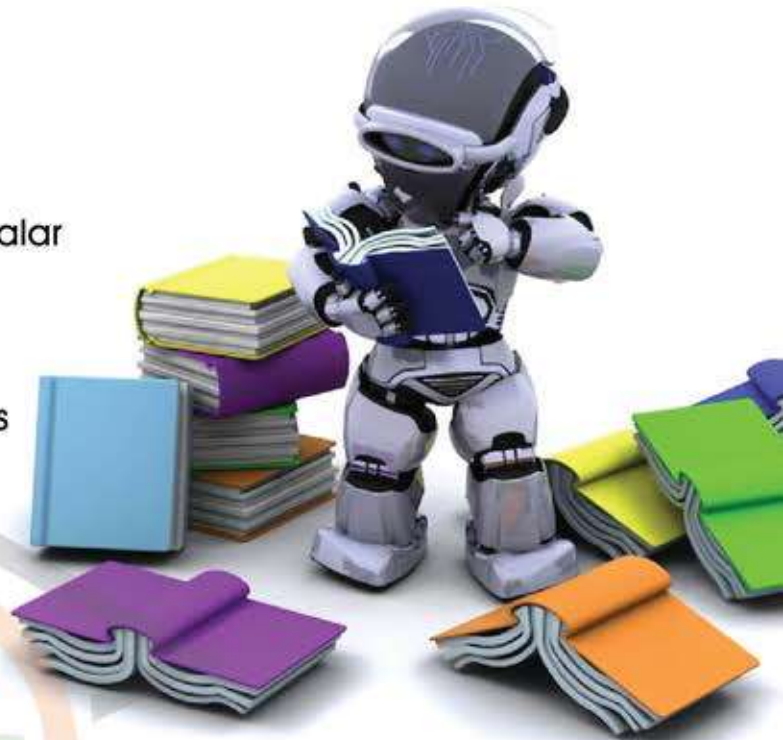
- > What is Dataset?
- > Various data sources
- > Wrangling, Exploration & Cleaning
- > Feature Extraction
- > Feature Engineering(EDA)
- > Data Standardization



## Module 8: Math Basics for Machine Learning

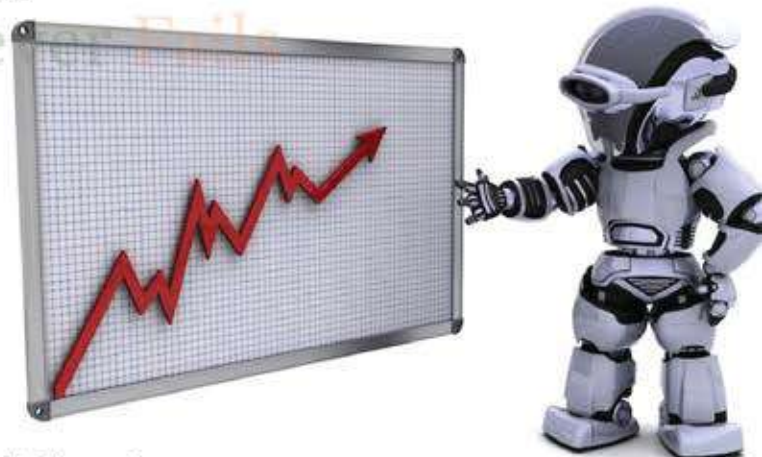
### > Linear Algebra

- Scalar
- Vector
- Vector Addition
- Vector Subtraction
- Multiplying a vector by a Scalar
- Angle between two vectors
- Dot Product of two Vectors
- Cross Product of two Vectors
- Projection of vector
- Scalar, Vector and Matrix
- Shape of Matrix
- Different types of Matrix
- Transpose of a Matrix
- Role of Matrix in Machine Learning
- Matrix Addition
- Matrix Subtraction
- Multiplying a Matrix by a scalar
- Multiplying two Matrices



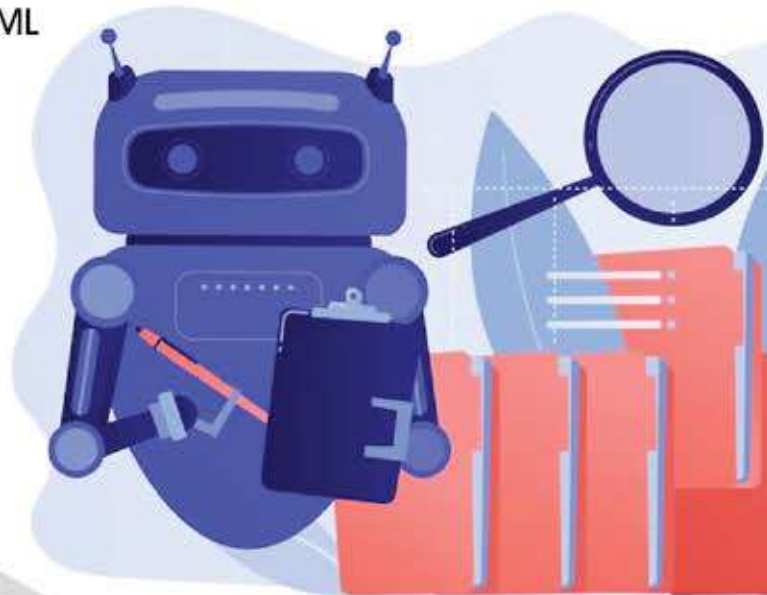
### > Statistics

- 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



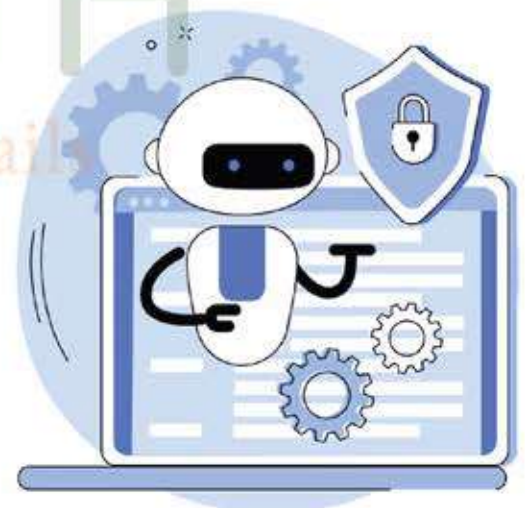
> Probability

- 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



> Calculus

- What Is Calculus?
- Limits and Differential Calculus
- Limits and Continuity
- Evaluating Limits
- Function Derivatives
- Continuous Functions
- Derivatives of Powers and Polynomials
- Derivative of the Sine and Cosine
- The Power, Product, and Quotient Rules
- Introduction to Multivariate Calculus



Module 9: Types of Machine Learning

- > Supervised Learning
- > Unsupervised Learning
- > Reinforcement Learning

Module 10: Training the Machine Learning Models

- > What is Machine Learning Model
- > How to select a model for training
- > Model Optimization techniques
- > Model Evaluation

## Module 11: Supervised Learning

- > What is supervised learning?
- > Types of Supervised Learning techniques:
- > Regression
- > Classification

## REGRESSION TECHNIQUES

### Module 12: Linear and Multi-Linear Regression

- > What is Linear Regression?
- > How Linear Regression works?
- > Prediction Error
- > Cost Function
- > Best Fit Line
- > Predicting House price using Linear Regression
- > Advantages and disadvantages



### Module 13: What is polynomial regression?

- > How it works and case study?
- > Hands on exercise with real time dataset
- > Advantages and disadvantages

### Module 14: Introduction to Classification

- > Target Variable for Classification
- > Metrics used in Classification
- > What is Class Imbalance and How do we deal with it?

## CLASSIFICATION TECHNIQUES

### Module 15: Logistic Regression

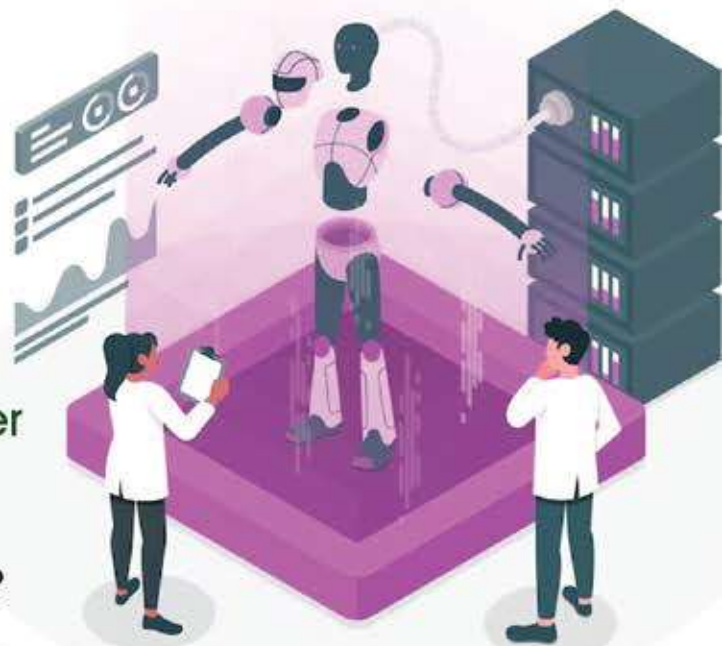
- > What is logistic regression?
- > Logistic function
- > Why it is called classification algorithm
- > Hands on exercises with practical dataset
- > Advantages and disadvantages





## Module 16: K-Nearest Neighbor (kNN) classifier

- > What is KNN?
- > How it works?
- > What is Euclidean distance?
- > How to choose value of K
- > Real time example
- > Hands on code with real dataset
- > Advantages and disadvantages



## Module 17: Naive Bayes classifier

- > What is Naïve Bayes?
- > Why it is called 'Naïve' Bayes?
- > How Naïve Bayes classification works?
- > Hands on exercises
- > Advantages and disadvantages

## Module 18: Decision Trees

- > What are decision trees?
- > How actually Decision trees help in machine learning?
- > How it works?
- > What is Gini index?
- > What is information gain and entropy?
- > What is pruning, why pruning in decision trees?
- > Hands on Practice with suited real time problems
- > Advantages and Disadvantages

## Module 19: Ensemble Learning in ML

- > What is Ensemble Learning?
- > Types of Ensemble Learning
- > Sequential ensemble methods
- > Parallel ensemble methods
- > What is Bagging (Parallel) and Boosting (Sequential)?
- > AdaBoost (Adaptive Boosting)
- > Gradient Boosting
- > XGBoost
- > Random Forest



## Module 20: Random Forest Classifier

- > Why it is called Random forest?
- > How it works?
- > Why Random forest is preferred over normal classification techniques
- > Random forest algorithm.
- > Advantages and disadvantages
- > Random forest code to breast cancer dataset



## Module 21: Support Vector Machines

- > What is SVM?
- > Why it is more popular?
- > What is Multi classification?
- > What are Kernel Techniques in SVM
- > Advantages and Disadvantages
- > SVM with IRIS dataset

## Module 22: Time Series Forecasting

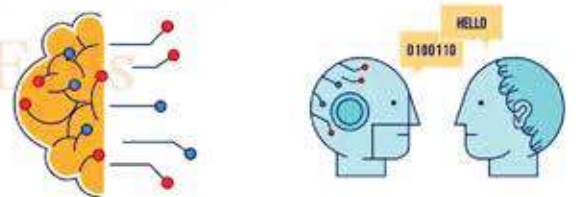
- > ARIMA, SARIMA and ARMA

## Module 23: Linear Discriminant Analysis (LDA)

- > Concept behind LDA

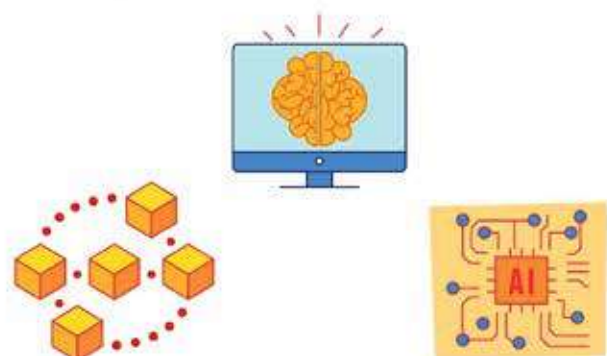
## Module 24: Un-Supervised learning

- > What is unsupervised learning?
- > Different unsupervised algorithms



## Module 25: Hierarchical clustering

- > Types of hierarchical clustering
- > Divisive (top down) clustering
- > Agglomerative (bottom up) clustering
- > How 'bottom up' works with dendrogram?
- > Code for clustering dataset using Agglomerative Clustering
- > Advantages and Disadvantages



## Module 26: K-Means Clustering

- > What is K Means clustering?
- > How K means works?
- > How to choose value k?
- > Real time Applications
- > Hands on code for K-means clustering
- > Advantages and Disadvantages



## Dimensionality Reduction Techniques

### Module 27: Principal Component Analysis (PCA)

- > How does PCA work?
- > Variance
- > Covariance
- > Eigenvalues, eigenvectors

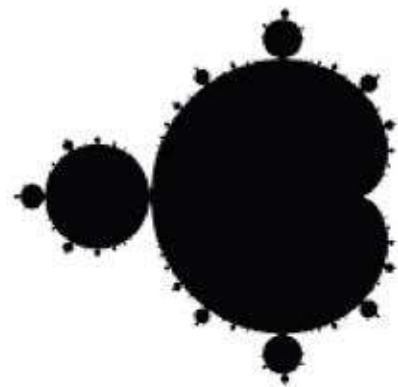
### t-Distributed Stochastic Neighbor Embedding (t-SNE)

### Module 28: Introduction to Natural Language Processing (NLP)

- > Introduction to NLP
- > What is NLP used for?
- > What are the techniques used in NLP?
- > Applications of NLP & Chatbots

### Module 29: Important NLP libraries

- > NLTK
- > Gensim
- > Polyglot
- > TextBlob
- > CoreNLP
- > QuePy



TextBlob

## Module 30: Introduction to Text Mining

- > What is Text data
- > What is the Input and output variable?

## Module 31: Techniques In Text Mining

- > Sentiment Analysis
- > POS(Part-Of-Speech ) Tagging
- > Text Classification



## Module 32: ML Projects with PYTHON

- > Face Recognition system
- > Diabetes Prediction
- > House Price Prediction
- > Fake News Prediction



## Ready to placement\*\*

- > Resume Preparation for fresher & experience
- > Testing Certification Guidevlines for SELENIUM
- > Testing Certification Model Papers
- > Automation Testing Certifications
- > Interview Questions
- > Knowledge on API Testing
- > Mock Interviews
- > Placement Assistance\*\*

## 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 Verma - 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 Malhotra - 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 Verma - Ven Star Solutions Pvt Ltd, Bangalore, Karnataka - ★★★★★



"I am extremely impressed with your training classes. I spent more money on books which just confused me more. Just wanted to tell you how invaluable your training have been to me in conjunction with my other programming courses ... Best money EVER spent. Moving from Silk Test to QTP environment and your training class have been a HUGE help. Thanks so much for being such a big part of my current and future success!!!"

Pandu Vikram - CA, USA - ★★★★★