

CELEBRATING
14 YEARS

QualityThought[®]

Transforming Dreams! Redefining Future!

No.1

TIMES
BUSINESS
AWARDS
HYDERABAD-2022

"MOST PROMISING SOFTWARE
TRAINING INSTITUTE"

DATA SCIENCE

WITH GENERATIVE-AI

(PYTHON, ML, DL, NLP)



Proficiency in Data Science Skills by Role

Data Analyst

- ▶ Data Collection.
- ▶ Data Cleaning & Preprocessing
- ▶ Data Analysis.
- ▶ Data Visualization.
- ▶ Report Generation.

Data Scientist

- ▶ Data Collection.
- ▶ Data Cleaning & Preprocessing
- ▶ Data Analysis.
- ▶ Data Visualization.
- ▶ Report Generation.

NLP Engineer

- ▶ Data Collection.
- ▶ Data Cleaning & Preprocessing
- ▶ Data Analysis.
- ▶ Data Visualization.
- ▶ Report Generation.

Computer Vision specialist

- ▶ Deep learning
- ▶ Object recognition & tracking
- ▶ Image segmentation
- ▶ Feature extraction
- ▶ Pattern recognition
- ▶ Image analysis

Gen AI Engineer

LLMS



ChatGPT

MLOps Engineer

- ▶ They are responsible for maintaining the infrastructure that supports the models and algorithms that power the products of their company, including:
- ▶ Monitoring the performance of these systems
- ▶ Identifying ways to improve their performance
- ▶ Investigating issues when they arise
- ▶ They also monitor the performance of your models, and they need to be able to troubleshoot any errors or bugs that may occur.

f @ in t qttworld | www.qualitythought.in

JOB ORIENTED INTENSIVE PROGRAM

20+ REAL-TIME
PROJECT

6 Hours Training

Mock Interviews

Internship

Resume Building

Aptitude / Softskills

Industry Ready Curriculum

40,000+
Students Trained

14,000+
Students Placed

200+
Placement
Companies

14 Years
of Student Trust

☎ 73373 44490



AMEERPET

#507, Nilgiri Block, Aditya Enclave



Step into the world of software training guided by the insights of an industry luminary, Ramana Bhupathi. With a career spanning over a decade and a half in the dynamic Information Technology sector, Mr. Bhupathi brings a wealth of experience and expertise that has shaped the course of modern software development.

Mr. Bhupathi's journey commenced at the forefront of technological innovation, with pivotal roles at Satyam Computer and Accenture Consulting. His hands-on involvement in diverse projects, leveraging cutting-edge technologies and agile development methodologies, set the stage for his profound insights into the digital realm.

Notably, his proficiency in executing projects on Microsoft Technologies became a hallmark of his career, reflecting his adaptability and commitment to staying at the vanguard of change.

A witness to the seismic shifts within the software development landscape, Ramana Bhupathi is resolute in his belief that the forthcoming decade will usher in even more rapid transformations. In his astute perspective, the IT workforce must embrace a culture of perpetual upskilling and reskilling to navigate this era of accelerated change.

Mr. Bhupathi's journey is characterized by a passion for cultivating enterprises rooted in emerging technologies. His endeavors have been focused on crafting platforms that not only resonate with the needs of today but also create a positive societal impact. His affinity for startups, each driven by a dedication to scalable solutions powered by Artificial Intelligence and Data Science, underscores his commitment to innovation.

Beyond the boardroom, Mr. Bhupathi's impact extends to the realm of education. His mentorship has illuminated the path for over 10,000 students and professionals, steering them toward lucrative careers in technology. With an unwavering calling to guide future tech talent, he embraced his true purpose, transitioning from the corridors of corporate leadership to the forefront of education. Today, his energy is channeled into honing the skills of young minds, immersing them in the nuances of new-age technologies through comprehensive training and impactful corporate programs.

Join us on an enlightening journey through the pages of this book, as Ramana Bhupathi's profound insights and guidance illuminate the ever-evolving landscape of Information Technology. His wisdom serves as a beacon for both novices and seasoned professionals, reminding us all that in the midst of change lies unparalleled opportunity.

Offered Programs



TRAINING (Offline / Online)

1. Any Graduate
2. By Realtime Practitioners
3. Live Project
4. Resume Preparation
5. Course Completion Certificate
6. 1 to 1.5 Hr per a Day
7. Offline / Online
8. Backup videos

Price
45K



(JOIP) INTENSIVE

1. Any Graduate
2. By Realtime Practitioners
3. Weekly Mock Interviews
4. Resume Preparation
5. Up to 3 Live Projects
6. 4 - 6 Hrs Daily Training
7. Offline / Online
8. Training Completion Certificate
9. Backup videos
10. Placement Assistance for 12months

Price
45K + 55K



(JOIP) INTERNSHIP

1. Any Graduate
2. Must attend Mock Test
3. By Realtime Practitioners
4. 3Hrs.- Internship/3Hrs.-Training
5. Live Project work assign by IT Staff
6. Preferred Offline / Online
7. Internship Completion Certificate
8. 6 - 8 Hrs Daily
9. Backup videos
10. Placement Assistance for 12months

Price
90K + 30K

Content Explanation

Program Name : AI Data Science

Demo Date / Time :

Course Fee :

Duration :

Mentor Name :

BEST JOB IN IT INDUSTRY : DATA SCIENTIST!

AI, ML and Deep Learning Constitute 60% of the Demand

Experience is losing its premium. With traditional IT job roles vanishing, Techies are turning to short-term Deep-learning courses to stay in the race.

Intermediate



Data Scientist

\$110k median base salary

Basic



Data Analyst

\$106k median base salary
4.3/5.0 level of job satisfaction

Expert



Gen AI Engineer

2000 openings
\$112k median base salary
4.1/5.0 level of job satisfaction

Top 10 Use Cases for Data Science & Machine Learning



Healthcare:
Patient Diagnosis



Finance:
Fraud Detection



Manufacturing:
Anomaly Detection



Retail:
Inventory Optimization



Government:
Smarter Services



Transportation:
Demand Forecasting



Network:
Intrusion Detection



E-Commerce:
Recommender Systems



Object Detection
Computer Vision Project



Media:
Interaction & Speed



Education:
Research Insight



ChatGPT API
Recommendation
Custom Chatbots

COURSE CURRICULUM

ADVANCED COURSE IN DATA SCIENCE

COURSE DURATION
4 MONTHS

SESSION HOURS
240 HRS

**CASE STUDIES
& PROJECTS**

A: DATA SCIENCE ADVANCED TOPICS

Module I: INTRODUCTION

Introduction to Jupyter Notebook
Getting Started with Data Science
Unix Introduction

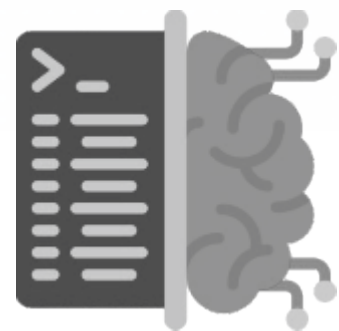
Module II: PYTHON

Python Basics
Python Introduction
Python Data Structure: Lists and Arrays
Python : Conditions and Branching
Python : Functions and Methods
Python : Objects and Classes
Practice Questions in Python
Introduction to NumPy
Linear Algebra in NumPy
Seaborn, Matplotlib
Project 1 : Satellite Image Data Analysis using NumPy
Introduction to Pandas



Module III: PROBABILITY AND STATISTICS

Introduction to Probability
Probability Distributions
Describing Distributions
Probability Distribution with Multiple Variables
Population and Sample
Point Estimate
Confidence Interval
Hypothesis Testing
A/B Testing



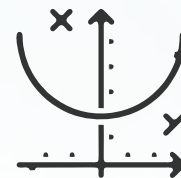
Module IV: CALCULUS

- Derivatives
- Optimization
- Gradients
- Gradient Decent
- Optimization in Neural Networks
- Newton Methods



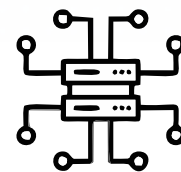
Module V : LINEAR ALGEBRA

- System of Linear Equations
- Elimination Method
- Row and Row Reduced Echelon form
- Vector Algebra
- Linear Transformation
- Determinants
- Eigen Values of Eigen Vectors



Module VI: DATA STRUCTURE ALGORITHMS

- Array
- String
- Linked List
- Searching Algorithm
- Sorting Algorithm
- Divide and Conquer Acqu
- Stack
- Queue
- Tree Data Structures
- Graph Data Structures
- Dynamic Program



Module VII: DATA SCIENCE AND METHODOLOGY

- Data Acquisition
- Data Wrangling
- Data Statistical Analysis, Grouping and Correlation
- Model Development
- Model Evaluation and Refinement
- Getting started in scikit-learn with the famous iris dataset
- Training a Machine Learning Model with scikit-learn
- Comparing Machine Learning Models in scikit-learn
- Data Science Pipeline: Pandas, Seaborn, and scikit-learn
- Cross-Validation for Parameter Tuning, Model Selection, and Feature Selection
- Efficiently Searching for Optimal Tuning Parameters
- Evaluating a Classification Model : Confusion Matrix and ROC



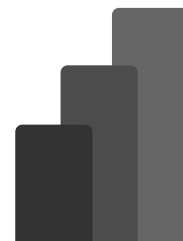
Module VIII : DATA VISUALIZATION

- Basic Plotting for Data Visualisation
- Data Manipulation for Visualisation
- 1D Data Analysis: Histograms, Boxplots, and Violin Plots
- Project 2 : Visualization of world GDP and carbon dioxide emission**
- Project 3 : Using Folium Library for Geographic Overlays**



Module IX: Power - BI

- Introduction to Power-Bi
- Data Extraction Process
- Data Transformations
- Data Modeling and DAX
- Data Visualization with Analytics
- Power-Bi, Q&A & Data Insights



Module X : MACHINE LEARNING

Simple Linear Regression
Multiple Linear Regression
Non-Linear Regression
Regression Methods
Ridge Regression and Lasso Regression
Linear Regression and Decision Tree Regression
Random Forest Regression
Logistic Regression
Decision Tree Classification
Random Forest Classification
Boosting Algorithms
Bagging
K- Nearest Neighbours Classification
Naive Bayes Classification
K-Means Clustering
Hierarchical Clustering
K-Means and Hierarchical Clustering on the same dataset
Density-Based Spatial Clustering of Applications with Noise (DB-SCAN)
Support Vector Machines & Regression
Principal Component Analysis (PCA)
Applying Principal Component Analysis on Handwritten Digits Dataset
Market Basket Analysis



Module XI : ALGORITHM DESIGN AND ANALYSIS

Evaluate the speed, runtime and memory dependencies of algorithmic models
Parallel computing systems such as SISD (Single Instruction SingleData Stream),
SIMD (Single Instruction Multiple Data Streams),
MISD (MultipleInstructions Single Data Stream),
MIMD (Multiple Instructions Multiple DataStreams)
How to use coding tools
Create, review and execute unit test cases
Corrective and Preventive actions for problems and defects can improve future designs
Measure and Optimize performance of algorithm
Deployment of the Models



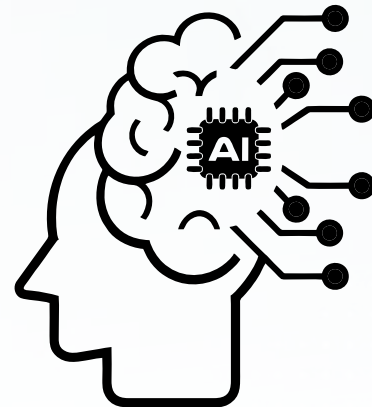
Module A: SQL: DATABASE QUERY PROCESSING

RDBMS Principals
Install a DB Engine
SQL syntax and Data types
Operators, Expressions, Comments
Data Definition Language (DDL)
Data Manipulation Language (DML)
Grant and Revoke
SQL Functions (Sum , Count, Avg etc)
Joins (self, left, right, full outer)
Queries and Sub Queries
SQL Clauses
SQL Window functions
SQL Real time examples
SQL live Practice Session



B. DEEP LEARNING TOPICS / AI (Artificial Intelligence)

Part 1: Introduction
L01: Introduction to deep learning
L02: The brief history of deep learning
L03: Single-layer neural networks: The perceptron algorithm
Part 2: Mathematical and computational foundations
L04: Linear algebra and calculus for deep learning
L05: Parameter optimization with gradient descent
L06: Automatic differentiation with PyTorch
L07: Cluster and cloud computing resources
Part 3: Introduction to neural networks
L08: Multinomial logistic regression / Softmax regression
L09: Multilayer perceptrons and backpropration
L10: Regularization to avoid overfitting
L11: Input normalization and weight initialization
L12: Learning rates and advanced optimization algorithms
Part 4: Deep learning for computer vision and language modeling



C. Generative AI & Prompt Engineering with ChatGPT-4

- Introduction to foundation Models
- Architecture of GPT-X Version
- Transformers Architecture in detail Prompt Engineering
- Open Source (LLM'S)
- Fine - Tuning open - AI models
- TEXT, Image, Audio Processing using Gen - AI

Tools

- ChatGPT
- Llama 2
- PALM 2
- Mid Journey Images, DALL - E3
- Mistral - 7B
- Azure open AI
- Gemini AI
- Project: Chatbots Specific to Domain

LLM use Cases:

- Train your own LLM from Scratch like GPT-3.5
- Develop your own ChatGPT from Scratch
- Develop your own LLM application using Prompt Engineering
- RAG
- Stable Diffusion Models

MLOps:

- Intro to MLOps
- Experiment Tracking in MLOps
- Orchestration
- Deployment
- Monitoring
- Best Practices
- Project



Communication Skills

Roots of	LSRW	Four Pillars of the English Language
Communication	7 Cs of Communication	
Roots of Grammar	Parts of Speech	Mastering Helping Verb And Main Verb
	Sentence Structure Development	
	Tense Logic	
	Worksheet Sessions	
Speech Intelligence	Vocabulary Development	
	Usage of words	
	Group Discussions	
	JAMS	
	Debates	
	Public Speaking	
Personality Development	Imagination and Innovation Training	
	Centralized Brain Storming	
	Problem Solving Skills	
	Desiion Making	
Mangement Skills	Time Management	
	Team Building	
	Task Management	
	Leadership Skills	
Interview Skills	Employability	
	Think like a Professional	
	Clearing HR Rounds	
	Salary Negotiation	
	Bond Negotiation	
Presentation Skills	Research Skills	Dream Company Reading Skills Comprehension Skills
	Public Speaking	
	Visualization	
	White Board Presentation	
	Mastering Powerpoint My Dream Company Research	
	Content Creation	
Creativity Skills	Mind Mapping	
	Role plays	
	Mock Interview on the Hot Seat	
	Listening Skills	
	Critical Thinking	
	Thought Analysis / Prioritization	
	SWOT Analysis	

«APTITUDE & REASONING»

Arithmetic

- ⇒ Problems on Numbers, Simplification
- ⇒ Equations
- ⇒ LCM & HCF and Fractions
- ⇒ Average
- ⇒ Ratio & Proportion
- ⇒ Problems on Ages
- ⇒ Alligation & Mixtures
- ⇒ Percentages
- ⇒ Profit and Loss
- ⇒ Time and Work,
Chain Rule, Pipes & Cisterns
- ⇒ Time and Distance
- ⇒ Problems on Trains
- ⇒ Boats and Streams
- ⇒ Simple and Compound Interest
- ⇒ Problems on Areas
- ⇒ Calender
- ⇒ Clocks
- ⇒ Permutations and Combinations
- ⇒ Probability
- ⇒ Data Interpretation

Reasoning

- ⇒ Puzzles
- ⇒ Blood Relations
- ⇒ Coding and Decoding
- ⇒ Ranking test,
- ⇒ Seating arrangement
- ⇒ Series (numeric and alpha numeric)
- ⇒ Data Sufficiency

2024 CALENDAR

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October


Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

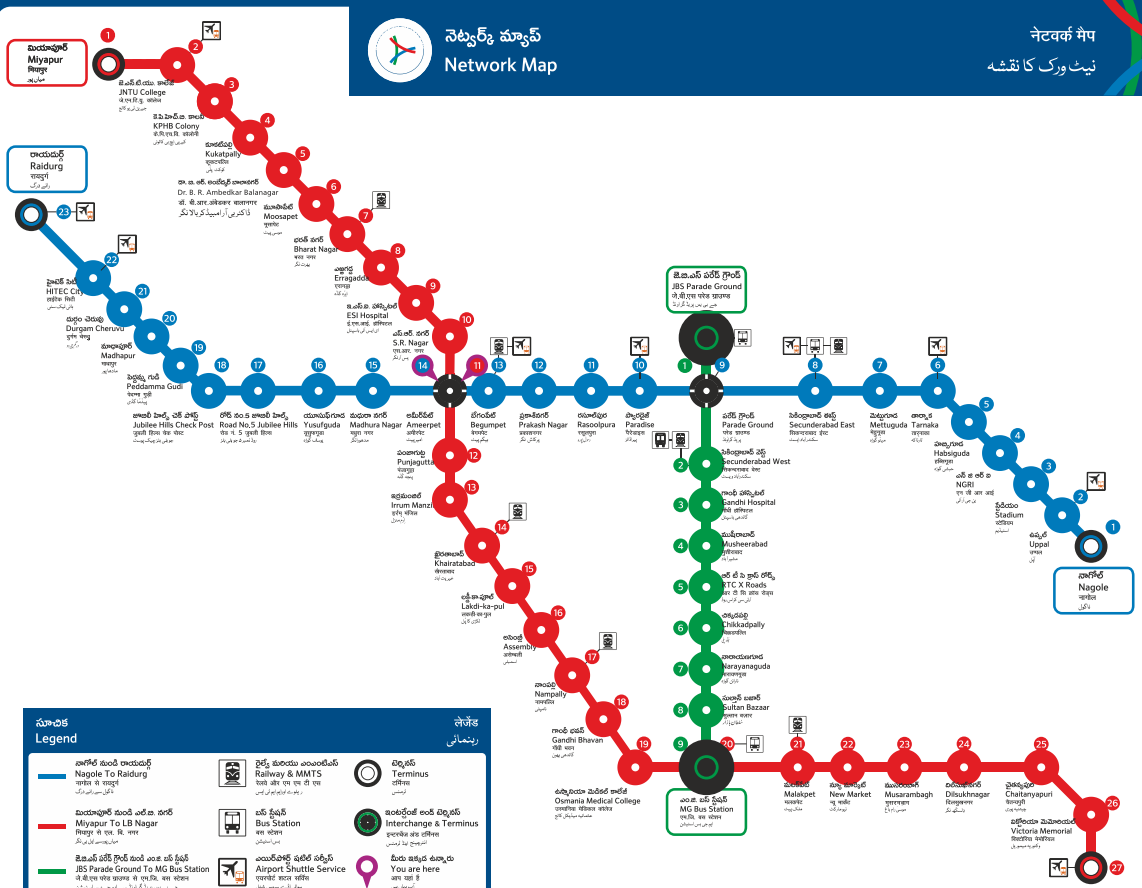
December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				



నెట్వర్క్ మ్యాప్
Network Map

నెట్వర్క్ మేప
نیٹ ورک کا نقشہ



సూచిక
Legend

- నాగోల్ నుండి రైడింగ్ (Nagole To Raiding) రైలు సేవ
- మైసూర్ నుండి నాగోల్ వరకు (Myapur To LB Nagar) రైలు సేవ
- జె.పి.పార్కే గ్రౌండ్ నుండి ఎం.గి.బస్ స్టేషన్ వరకు (JPS Parade Ground To MG Bus Station) షట్టిల్ సేవ
- స్టేషన్ నెంబర్స్ (Station Numbers)
- టెర్మినల్ స్టేషన్ (Terminus)
- ఇంటర్చేంజ్ స్టేషన్ (Interchange)
- మీ ఇక్కడ (You are here)

Customer Service : 040-23332555
79959 99533



Industry Curriculum	Learn from Practitioners	Experiential Learning	Professional Certification	Education Loan

Experienced Industry Faculty | Placement Assistance

Our Students Are Placed In

QualityThought

73373 44490

Quality Thought Infosystems India (P) Ltd.

#507, Nilgiri Block, Ameerpet, Hyderabad-500016 | www.qualitythought.in | info@qualitythought.in