



Data Science with Python Training

www.cognixia.com

About Cognixia

Cognixia- A Digital Workforce Solutions Company is dedicated to delivering exceptional trainings and certifications in digital technologies. Founded in 2014, we provide interactive, customized training courses to individuals and organizations alike, and have served more than 130,000 professionals across 45 countries worldwide.

Our team of more than 7000 industry experts facilitate more than 450 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand self-paced online trainings cover a wide array of specialty areas, including all of the following:

- IoT
- Big Data
- Cloud Computing
- Cyber Security
- Machine Learning
- AI & Deep Learning
- Blockchain Technologies
- DevOps

Cognixia is ranked amongst the top five emerging technologies training companies by various prestigious bodies. We're also RedHat Enterprise Partner, Microsoft Silver Learning Partner and an authorized training partner for ITIL, Automation Anywhere and ISC2.



OUR AWARDS & AFFILIATIONS

 **Best Workplace Amongst Emerging Enterprises** Awarded By
Great Indian Workplace Awards – 2018
Mumbai, India



 **Best Training Provider of the Year**
Awarded By
The Golden Globe Tiger Awards – 2018
Kuala Lumpur, Malaysia



World HRD Congress has awarded
for Excellence in Training (Asia) 

  **WORLD HRD CONGRESS**
Cognixia is awarded as
Training Company of the Year, 2018

  **ISO 9001:2015 CERTIFIED**
ISO 9001:2015 Certified
Quality Management System


  **ISO/IEC 27001:2013 CERTIFIED**
ISO/IEC 27001:2013 Certified
Information Security Management System

  **AFRICA C**
Best Emerging Technology Training Organization
at the Middle East Training &
Development Leadership Awards 2018

 **TOP 5 CLOUD TRAINING INSTITUTIONS INDIA 2016**  **HIGHER EDUCATION REVIEW**

 **TOP 5 Big Data TRAINING INSTITUTES 2017**  **siliconindia**

 **TOP 10 IoT TRAINING INSTITUTES PROMISING IN INDIA 2017**  **HIGHER EDUCATION REVIEW**

 Top 10 IoT Training Companies for the
Second consecutive year.  **2017 IoT India MAGAZINE**

 **siliconindia** BEST TRAINING PROVIDER
BIG DATA HADOOP DEVELOPER OF THE YEAR 2016

 Top 10 IoT Training Institutes – 2016
 **Analytics India MAGAZINE**

  **Asian Training & Leadership Award, Dubai**

 **TOP 5 Emerging Technologies TRAINING COMPANIES 2016**  **siliconindia**

AUTHORIZED TRAINING PARTNERS FOR



AUTOMATION
ANYWHERE



Silver
**Microsoft
Partner**



Get the Best out of Data Science with Python Course

Get the Best out of Data Science with Python Course preferred languages for the Data Science discipline. And when it comes to building Machine Learning systems, Python offers a powerful and flexible platform. Taking a hands-on approach, our course is designed to give you ample opportunities to fiddle around with a wide variety of Data Science and Machine Learning algorithms. We believe that a practical approach is better than only theoretical erudition, and so we present several real-life use cases in our training conducive to the long-term retention of learning and development.

The Audience

- Software developers and programmers who want to reap the benefits of a lucrative Data Science and Machine Learning career.
- Data Analysts or Financial Analysts from the non-IT industry who want to make a transition to the IT industry.
- Individuals, Students and corporate professionals who want to upscale their technical skill set.

Duration - 42 hours.



DETAILED CURRICULUM : MODULES

1. Introduction To Data Science & Data Science Project Life Cycle

- Data Science Introduction
- Data Science Project Lifecycle - CRISP-DM Model
- Data Science Toolkit
- Job outlook
- Prerequisite & Target Audience

2. Introduction to Python Programming - Part 1 (Hands-on Lab)

- Introduction to Python, Anaconda, Spyder & Jupyter Notebook
- Installation & Configuration
- Basic Python Programming Concepts
- Data Structures in Python -
 - List
 - Tuples
 - Dictionary

3. Introduction to Python Programming - Part 2 (Hands-on Lab)

- NumPy Array & its applications
- Control Structures
- Creating Custom Functions
- Exception Handling

4. Basic Statistics (Theory & Hands-on Lab)

- Random Variable
- Type of Random variables - Discrete & Continuous
 - Nominal
 - Ordinal
 - Interval
 - Ratio

- Central Tendencies
 - Mean
 - Mode
 - Median
- Measurement of dispersion
 - Variance
 - Standard Deviation
- Basic Statistics using NumPy

5. Probability Theory

- Introduction to Probability Theory
- Probability Distribution Analysis
- Probability Mass Function
- Probability Density Function
- Normal Distribution
- Standard Normal Distribution
- Covariance & Correlation

6. Statistical Analysis using Pandas & Matplotlib (Hands-on Lab)

- Pandas Dataframes & its applications
- Importing tables from RDBMS
- Analytics & Data Visualization using Matplotlib
- Univariate & Bivariate Statistical Analysis using Matplotlib
 - Line Plot
 - Area Plot
 - Histogram
 - Box Plot
 - Scatter Plot

DETAILED CURRICULUM : MODULES

7. Inferential Statistics

- Sampling Analysis
- Inferential Statistics
- Sampling Distribution
- Central Limit Theorem
- Hypothesis Testing
- 1 tail test and 2 tail test
- Type I and Type II errors
- P value
- Level of Significance
- Confidence Interval

8. Applied Inferential Statistics (Hands-on Lab)

- Statistical Analysis using Seaborn
 - KDE Plot
 - RegPlot
 - Joint Plot
 - Heatmap
- Data Sampling
- Simulating Normal Distribution
- Calculating PDF & CDF
- Hypothesis Testing - Case Study

9. Machine Learning Concepts

- Introduction to Machine Learning
- Estimation Function
- Reducible & Irreducible errors
- Supervised & Unsupervised ML Algorithms
- ML Model Training & Testing
- Parametric & Non-Parametric Algorithms

- Regression Analysis
 - Simple Linear Regression
 - Multiple Linear Regression
- Linear Regression methods
 - Ordinary Least Square
 - R Squared method
 - Adjusted R Square
- Regression Evaluation Metrics - MSE, RMSE
- Bias & Variance
- Model Under fitting and Overfitting

10. Machine Learning Concepts & Case Studies - Part 1 (Hands-on Lab)

- Feature Engineering
- Null Data Imputation Techniques
- Outlier Analysis
- Categorical Encoding
 - Label Encoding
 - One Hot Encoding
- Feature Selection Techniques
 - Correlation Analysis
 - Chi Square Test
- Machine Learning Case Study 1 - Multiple Linear Regression

11. Machine Learning Concepts & Case Studies - Part 2 (Hands-on Lab)

- Logistic Regression
 - Simple Logistic Regression
 - Multiple Logistic Regression
- Logistic Regression Function
- ROC AUC Analysis
- Model Evaluation using Confusion Matrix

DETAILED CURRICULUM : MODULES

- Accuracy, Precision, Recall & Specificity
- Machine Learning Case Study 2 – Multiple Logistic Regression

12. Machine Learning Concepts & Case Studies - Part 3 (Hands-on Lab)

- Feature Scaling
- Addressing Imbalanced Data using SMOTE/MSMOTE
- Model Cross Validation using K- Fold Cross Validation Classification
- Analysis
- K Nearest Neighbor Classifier
- Decision Trees
 - Classification and Regression Tree
- Random Forest
- Information Gain & Entropy
- Machine Learning Case Study 3 – Classification Analysis using KNN,
- Decision Tree & Random Forest

13. Machine Learning Concepts & Case Studies - Part 4 (Hands-on Lab)

- Clustering Algorithms
 - K Means Clustering
 - Hierarchical Clustering
- Elbow Curve Graph
- Machine Learning Case Study 4 – Clustering Analysis using K-Means
- Clustering

14. Machine Learning Concepts & Case Studies - Part 5 (Hands-on Lab)

- Recommendation Engines
- Collaborative filtering & Types
- Machine Learning Case Study 5 – Recommendation Engine using
- Collaborative filtering

Why choose Cognixia?



LIFETIME LMS ACCESS



24 x 7 SUPPORT



REAL-LIFE PROJECTS & CASE STUDIES



INDUSTRY EXPERTS AS TRAINERS



INDUSTRY STANDARD CERTIFICATE



POTENTIAL CAREER OPTIONS

Data Scientist

Data Architect



TESTIMONIALS



ELIJAH JEVONS, MALAYSIA

A perfect mix of theory and practical!! I recommend this course for every IT professional out there.



CHRISTOPHER WAKELIN, SINGAPORE

I knew Python a bit so I was inclined to take this course as Data Science and Machine Learning have great career prospects. It would have been difficult to learn from huge texts that do not cover all topics. Cognixia has a very impressive curriculum that focuses on the basics and covers advanced topics as well. Thank you for offering such courses.



ALANNAH ABEL, SINGAPORE

A big Thanks to Cognixia and my trainer to help me choose the right technology platform. As suggested, Python is the best language to start from. So, I took the course on Data Science and Machine Learning which helped me in my career prospects



Max W, USA

This training program is awesome! The concepts are very well explained and the course curriculum is well structured. Hope to see more relevant algorithms for various functionalities. Overall, I am extremely happy with Team Cognixia.



Gregory T, USA

The Trainers are extremely patient and have sound understanding of Machine Learning Concepts, Data Science Concepts, and Python Language Codes. It was an amazing live-virtual experience by Cognixia.

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To learn more visit
www.cognixia.com