Cognixia®

**Machine Learning
with Python Training**

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 100,000 professionals across 37 countries worldwide.

Our team of more than 4,500 industry experts facilitate more than 400 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 an MAPR Advantage Partner, Hortonworks Community Partner, RedHat Enterprise Partner, Microsoft Silver Learning Partner and an authorized training partner for Dell EMC, Pivotal, VMware and RSA technologies.

OUR AWARDS & AFFILIATIONS

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 Emerging
5 Technologies 2016 siliconindia
TRAINING COMPANIES

TOP CLOUD
5 TRAINING
INSTITUTIONS INDIA 2016
HIGHER EDUCATION Review

TOP Big Data 2017
5 TRAINING INSTITUTES siliconindia

TOP IoT TRAINING
10 PROMISING INSTITUTES IN INDIA 2017
HIGHER EDUCATION Review

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

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

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

THE GOLDEN GLOBE TIGERS

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
ISO/IEC 27001:2013 Certified
Information Security Management System

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

SOME FORMIDABLE NAMES AS

OUR TRAINING PARTNERS

redhat

MAPR

HORTONWORKS PARTNERWORKS CONSULTANT COMMUNITY

Silver Microsoft Partner

Pivotal

DELL EMC

RSA

AUTOMATION ANYWHERE

ITIL

(ISC)²

digital marketing institute

WHAT IS MLAI WITH PYTHON ?

Python is one of the most popular dynamic programming languages being used today. Developed by the Dutchman – Guido van Possum in the 80s, Python is an open-source and object-oriented programming language.

Cognixia's Machine Learning and Artificial Intelligence with Python helps you excel in Python programming concepts such as data and file operations, object-oriented concepts and various Python libraries such as Pandas, Numpy, Matplotlib, etc. besides also discussing machine learning and artificial intelligence concepts.

The course helps you build expertise in various EDA and Machine Learning algorithms such as regression, clustering, decision trees, Random Forest, Naïve Bayes and Q-Learning and also in various artificial intelligence algorithms such as neural networks, Deep learning, LSTM, RNN etc. This training helps learners understand the basic concepts of statistics and time series data. It covers all types of Machine Learning Algorithms - supervised, unsupervised and reinforcement learning algorithms. The course also discusses a lot of important use cases and real-life case studies.

WHO IS THE COURSE FOR?

- Programmers, Developers, Architects, Technical Leads
- Developers aspiring for a career in machine learning
- Analytics managers
- Business Analysts with a keen interest in machine learning and artificial intelligence
- Information Architects desiring expertise in Predictive Analytics
- Python professionals keen to design automatic predictive models

ELIGIBILITY/ PRE-REQUISITES

- Basic understanding of Computer Programming Languages
- Fundamentals of Data Analysis will be beneficial
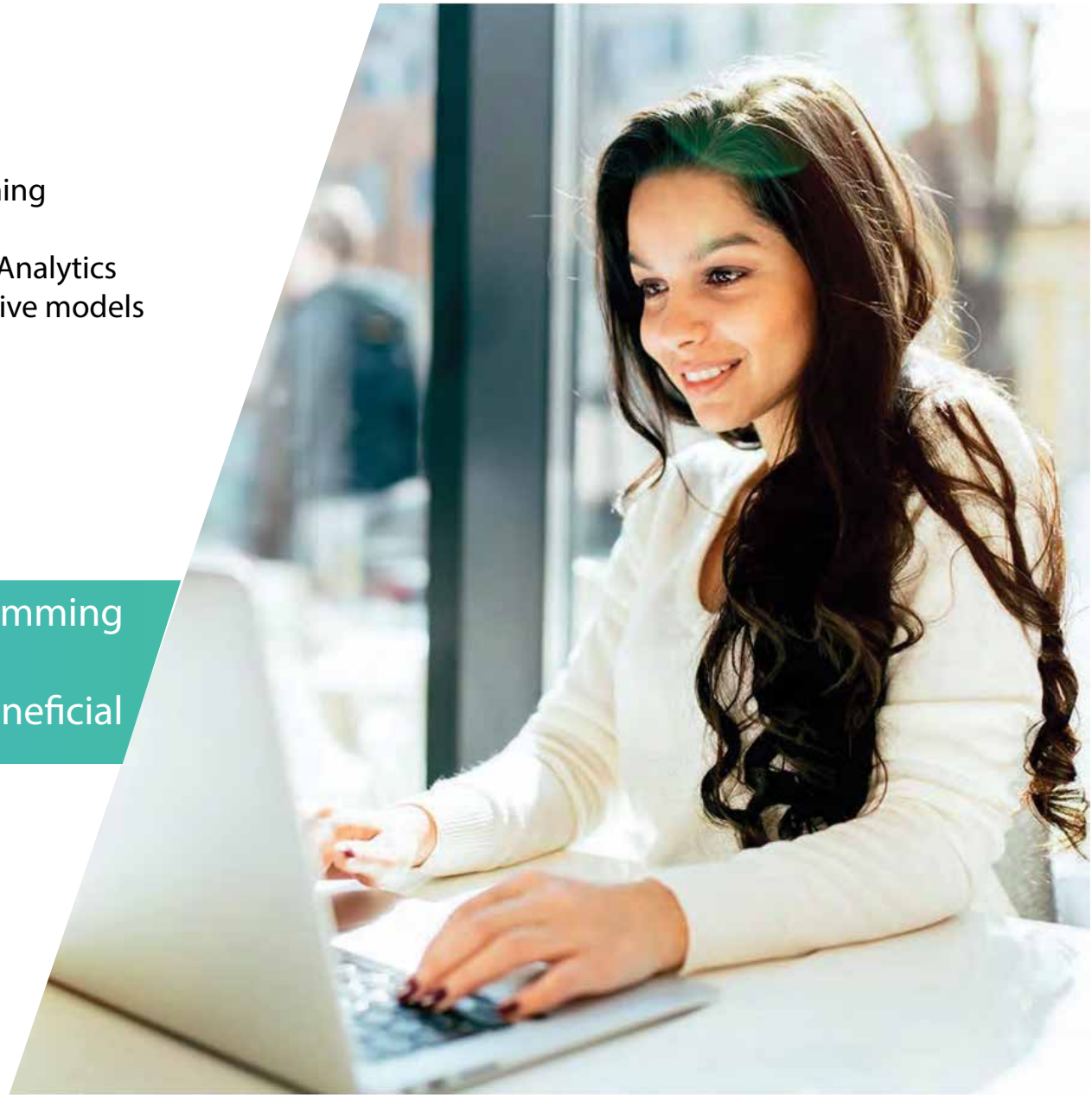
PROGRAM STRUCTURE AND PLATFORMS

42 hours live online training with an industry expert trainer

PoC support and multiple assignments to gain a thorough understanding
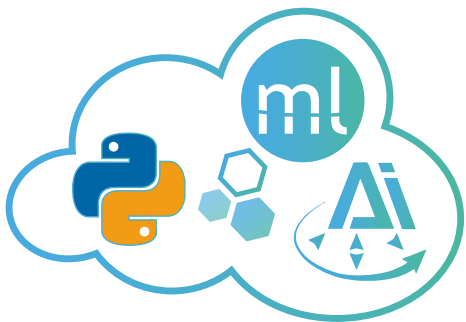
DETAILED CURRICULUM : MODULES

Introduction to Python Programming
- Overview of Python
- History of Python
- Python Basics – variables, identifiers, indentation
- Data Structures in Python (list, string, sets, tuples, dictionary)
- Statements in Python (conditional, iterative, jump)
- OOPS concepts
- Exception Handling
- Regular Expression

Introduction to various packages and related functions
- Numpy, Pandas and Matplotlib
- Pandas Module
- Series
- Data Frames
- Numpy Module
- Numpy arrays
- Numpy operations
- Matplotlib module
- Plotting information
- Bar Charts and Histogram
- Box and Whisker Plots
- Heatmap
- Scatter Plots

Data Wrangling using Python
- NumPy – Arrays
- Data Operations (Selection , Append , Concat , Joins)
- Univariate Analysis
- Multivariate Analysis
- Handling Missing Values
- Handling Outliers

Introduction to Machine Learning with Python
- What is Machine Learning?
- Introduction to Machine Learning
- Types of Machine Learning
- Basic Probability required for Machine Learning
- Linear Algebra required for Machine Learning

Supervised Learning - Regression
- Simple Linear Regression
- Multiple Linear Regression
- Assumptions of Linear Regression
- Polynomial Regression
- R2 and RMSE

Supervised Learning – Classification
- Logistic Regression
- Decision Trees
- Random Forests
- SVM
- Naïve Bayes
- Confusion Matrix

DETAILED CURRICULUM : MODULES

Dimensionality Reduction
- PCA
- Factor Analysis
- LDA

Unsupervised Learning - Clustering
- Types of Clustering
- K-means Clustering
- Agglomerative Clustering

Additional Performance Evaluation and Model Selection
- AUC / ROC
- Silhouette coefficient
- Cross Validation
- Bagging
- Boosting
- Bias v/s Variance

Recommendation Engines
- Need of recommendation engines
- Types of Recommendation Engines
- Content Based
- Collaborative Filtering

Association Rules Mining
- What are Association Rules?
- Association Rule Parameters
- Apriori Algorithm
- Market Basket Analysis

Time Series Analysis
- What is Time Series Analysis?
- Importance of TSA
- Understanding Time Series Data
- ARIMA analysis

Reinforcement Learning
- Understanding Reinforcement Learning
- Algorithms associated with RL
- Q-Learning Model
- Introduction to Artificial Intelligence

Artificial Neural Networks and Introduction to Deep Learning
- History of Neural Network
- Perceptron
- Forward Propagation
- Introduction to Deep Learning

COGNIXIA USPs

- LIFETIME LMS ACCESS
- 24 x 7 SUPPORT
- REAL-LIFE PROJECTS & CASE STUDIES
- INDUSTRY EXPERTS AS TRAINERS
- INDUSTRY STANDARD CERTIFICATE

POTENTIAL CAREER OPTIONS

MACHINE LEARNING ALGORITHM ARCHITECT

MACHINE LEARNING SCIENTIST

RESEARCHER – MACHINE LEARNING

MACHINE LEARNING EXPERT

MACHINE LEARNING ENGINEER

TESTIMONIALS

" JAMES MITCHEM, USA

The machine learning and artificial intelligence with Python training program from Cognixia helped me understand how these revolutionary technologies are transforming the world, and how I could play a part in it. Moreover, the support I received from the trainer as well as the tech support team was so awesome!

" RECHELE ACHINAPURA, CANADA

With this course, Cognixia delivers an excellent training – highly engaging and super informative. I thoroughly enjoyed my learning experience with Cognixia.

" SUMANTA BANERJEE, INDIA

I have always been keen to learn new things and Cognixia has helped me fuel my interest in machine learning and artificial intelligence. I am really glad I enrolled for this course and got to learn so much. The training program is very detailed and covers everything one needs to understand to be a successful professional in the field.

" MATT UNGERMAN, AUSTRALIA

The ML and AI with Python course offered by Cognixia is very interesting indeed. I just received my certificate and I am already being considered for a promotion. What more could I ask for!

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