



 Cognixia™

**Advanced Machine Learning
with Deep Learning 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 nationwide across 37 countries worldwide.

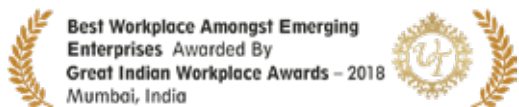
Our team of more than 4,500 industry experts facilitate more than 400 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand 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



SOME FORMIDABLE NAMES AS OUR TRAINING PARTNERS



redhat.

MAPR



Silver
Microsoft
Partner

Pivotal™

DELL
EMC²

vmware®

RSA



ITIL®

(ISC)²®



THE CURRICULUM

Day/Session	Content	Hours
Day 1	<ul style="list-style-type: none">• Introduction to Artificial Intelligence & Machine Learning• Overview- AI Vs ML Vs Deep Learning• Overview- Subfields of Artificial Intelligence- Robotics, ML, NLP, Computer Vision• Applications of Machine Learning/AI• Difference b/w AI & Programmed Machine• R & R Studio Setup & Installation• Quick tour of R-Studio – Variables, Install, Plot, help, console, repository• Important Links to get datasets – Kaggle, data.gov etc	3 hrs
Day 2	<ul style="list-style-type: none">• Classes & Objects• Vector and List in R• Hands-on	3 hrs
Day 3	<ul style="list-style-type: none">• Matrix & Factor in R• Hands-on	3 hrs
Day 4	<ul style="list-style-type: none">• Dataframe in R• Plotting using ggplot2 in R – Scatter plot, Box plot, Hist, Bar chart etc• N-Dimensional Array in R• Table function in R• Hands-on	3 hrs
Day 5	<ul style="list-style-type: none">• Statistics in R – Mean, Median, Mode, Range, Variance, SD, Inter Quartile• Twitter- R Integration• Get data from MySQL using R• Get data from website using R• Hands-on	3 hrs

Day/Session	Content	Hours
Day 6	<ul style="list-style-type: none"> Steps involved in solving a Machine Learning Usecase Data preprocessing/preparation in R Missing data, Categorical data, Feature Scaling, Splitting data to test & train sets Hands-on with sample data 	3 hrs
Day 7	<ul style="list-style-type: none"> Types of Machine Learning- Supervised & UnSupervised Machine Learning Supervised Learning – Regression & Classification UnSupervised Learning- Clustering Regression Algorithm- Simple Linear Regression UseCase: Create a Model to predict Salary from years of exp Classification Algorithm- K Nearest Neighbour UseCase: Create a Model to predict if a particular customer will purchase a product or not Hands-on with Sample data 	3 hrs
Day 8	<ul style="list-style-type: none"> Clustering Algorithm- Kmeans Elbow Method in Kmeans to predict optimal no. of Clusters Clustering Algorithm- Hierarchical Clustering Dendograms in Hierarchical Clustering to predict optimal no. of Clusters UseCase: Using Kmeans & HC to extract patterns to analyse customer data based on spending score and income Hands-on with Sample data 	3 hrs
Day 9	<ul style="list-style-type: none"> Logistics Regression UseCase: Create a Model to predict if a particular customer will purchase a product or not How to create and read ROC curve How to check the accuracy of the Model using Confusion Matrix Hands-on with Sample data 	3 hrs
Day 10	<ul style="list-style-type: none"> Random Forest using Decision Trees Support Vector Machien for Classification UseCase: Create a Model using Random Forest & SVM to predict if a particular customer will purchase a product or not How to create and read ROC curve How to check the accuracy of the Model using Confusion Matrix Hands-on with Sample data 	3 hrs

Day/Session	Content	Hours
Day 11	<ul style="list-style-type: none"> Polynomial Regression UseCase: Create a Model to predict Salary from years of exp UseCase: Satellite Image Classification using Random Forest. Create a Model to identify/classify different types of land re.g barren, forest, urban, river etc from a Satellite image Hands-on with Sample data 	3 hrs
Day 12	<ul style="list-style-type: none"> Dimensionality Reduction Feature Selection Vs Feature Extraction Feature Selection using Backward Elimination technique Feature Extraction using PCA Hands-on with Sample data How to tune/check accuracy of Model using P- Value, R Square, Adjusted R Square, CAP 	3 hrs
Day 13	<ul style="list-style-type: none"> Overview of NLP/Text Mining Libraries in R for NLP/text mining – tm, Snowball, dplyr Bag of words using R Use Case: Restaurants Review System Sentiment Analysis using R Usecase: Analyse twitter data for two teams to predict sentiments Hands-on with Sample data 	3 hrs
Day 14	<ul style="list-style-type: none"> Overview of types of recommendation engines – Example Ecommerce, Netflix etc Frequently bought items , User Based Collaborative Filtering Libraries in R for recommendation – recommenderlab Use Case: Analyse grocery store data to find out frequently bought together item Use Case: Analyse jokes data to recommend best jokes to users Hands-on with Sample data 	3 hrs

Day/Session	Content	Hours
Day 15	<ul style="list-style-type: none"> • Time Series data analysis in R • Components in time series - Trend, Seasonality • Arima Model Vs ETS Model • Use Case: Forecast Flight booking from Airline data • Sentiment Analysis using R • Hands-on with Sample data • Deep Learning Introduction • Limitations of ML and how Deep Learning comes to rescue • Biological Neural Network Vs Artificial Neural Network • Popular Frameworks of DeepLearning – Tensorflow, Keras 	3 hrs
Day 16	<ul style="list-style-type: none"> • Understanding Deep Learning Terminologies – Input Layer, Hidden Layer, Output Layer, Activation Function, Cost Function, BackPropogation, Gradient Descent, Epoch, Learning Rate • Install Keras (uses tensorflow) • Use Case: Create a model using ANN for boston housing data 	3 hrs
Day 17	<ul style="list-style-type: none"> • Convolutional Neural Network • Convolution, Pooling, Flattening • Use Case: Image classification using CNN • Hands-on with Sample data 	3 hrs
Day 18	<ul style="list-style-type: none"> • Case Study – Predict Customer Churn 	3 hrs
Day 19	<ul style="list-style-type: none"> • Case Study – Canada Crime Analysis 	3 hrs
Day 20	<ul style="list-style-type: none"> • Summary & QA 	3 hrs

COGNIXIA'S KEY DIFFERENTIATORS



LIFETIME LMS ACCESS



24 x 7 SUPPORT



REAL-LIFE PROJECTS & CASE STUDIES



INDUSTRY EXPERTS AS TRAINERS



INDUSTRY STANDARD CERTIFICATE



EXIT PROFILE

DATA SCIENTIST

DATA ARCHITECT

DATA ANALYST

MACHINE LEARNING SPECIALIST



TESTIMONIALS



TIUANG PARKER, QUEBEC, CANADA

I am a Data Scientist and this 'Machine Learning' upgraded platform was new to me. This course has simply done wonders for me. I had specific problems and the answers were found on LMS. Overall, it was a wonderful experience.



DAYZEE THOMSON, EDINBURGH, UNITED KINGDOM

I recently went through rigorous Advanced Machine Learning with Deep Learning Program offered by Cognixia. I was really impressed by their upgraded content which was toe-to-toe with latest industry trends. One of the things that impressed me was their support mechanism. The learning support would be available for you 24x7.



REHANNA ROMO, NY, USA

I have plans to set-up my own venture and when I looked for the online training program this seemed affordable and interesting. But once you go through the training you feel you are at advantage of getting more than you expect. I already have gone through two of their trainings, one technical and one self-paced. It has helped me a lot.



BRIO ALLEN, LONDON, ENGLAND

To begin with, their support team really understands the meaning of support and they will guide through your requirements. Then everything was a piece of cake. Even a tough course like Machine Learning and Deep Learning seemed easy as the trainer would start from scratch. It has been a great and wonderful experience.



SCOTT LIZA, CALIFORNIA, USA

Being an Algorithm specialist I was getting stuck at few steps after I have been moved to a different role. I enrolled for the course of Advanced Machine Learning with Deep Learning given by Cognixia and thank God I did. The trainer was awesome; the LMS material was crisp and upgraded. Altogether, it has helped me to handle my job with great ease and the updated material and trainer's guidance helped me to upgrade

Advanced Machine Learning with Deep Learning Training



To learn more visit
<https://www.cognixia.com/>