



# Data Science Training

[www.cognixia.com](http://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 100,000 professionals across 37 countries worldwide.

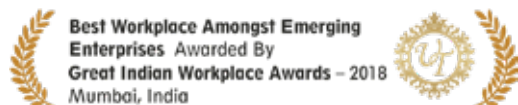
Our team of more than 4,500 industry experts facilitate more than 400 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand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





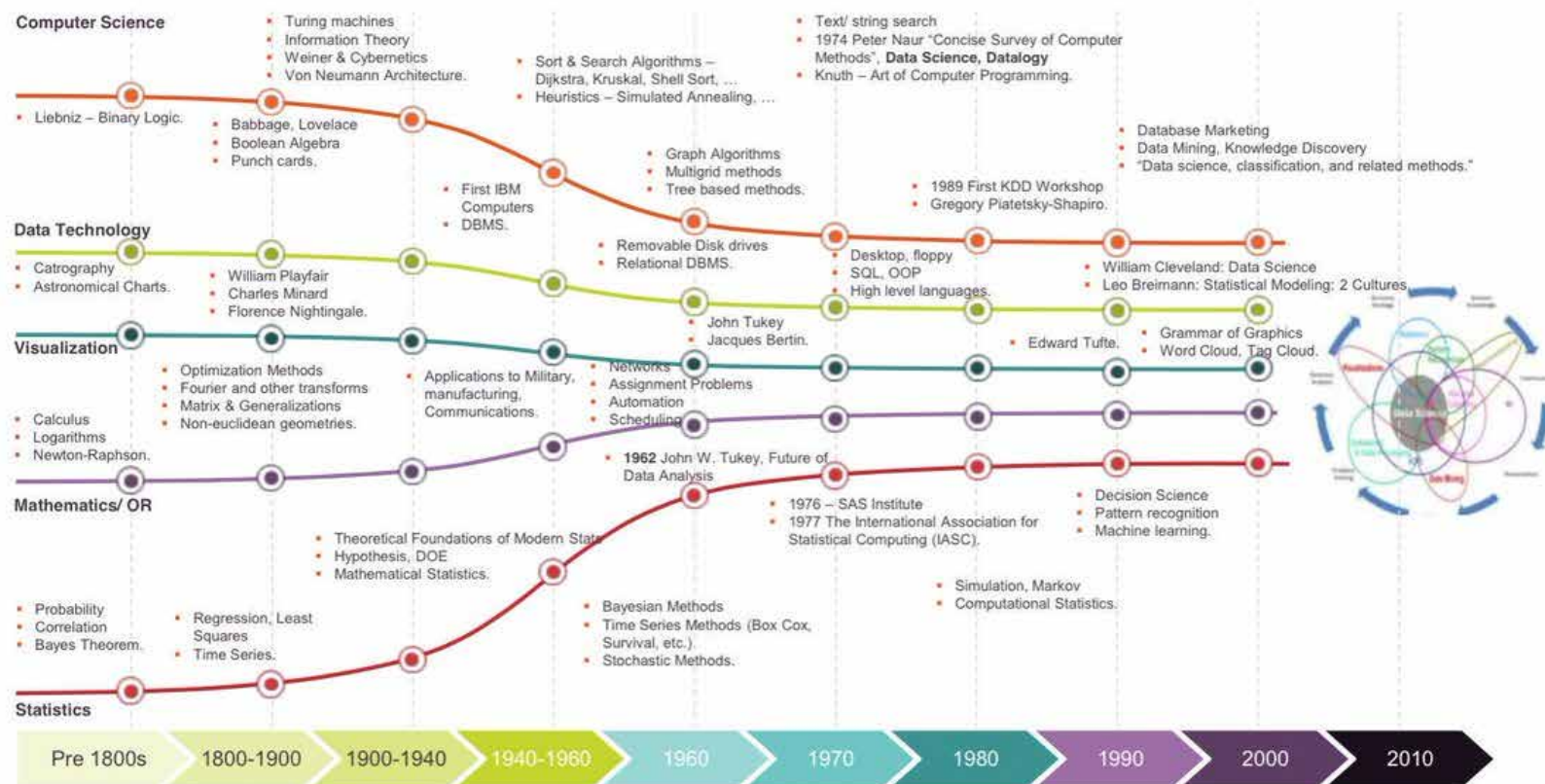
# SOME FORMIDABLE NAMES AS OUR TRAINING PARTNERS



# ABOUT COGNIXIA'S DATA SCIENCE COURSE

Cognixia's course on Data Science covers the basic as well as advanced concepts of Big Data, Data analytics Life Cycle, and tools like MapR and Hadoop. Enabling the learners to develop a practical foundation in these disciplines, Cognixia 's Data Science course enables learners to undertake and effectively leverage Big Data and other analytics platforms to address complex business challenges with insightful solutions. Cognixia 's state-of-the-art facilitate getting a hands-on experience for learners, working with professional data scientists. A final lab session forms an integral part of this course, which aims at giving learners an opportunity to practically implement the concepts learnt in the course.

## A brief history of Data Science



Source : Capgemini

shared via @pradeeprao\_

# WHO SHOULD STUDY DATA SCIENCE?

Data Science is for anyone who aspires to learn and apply the concepts of transforming data into valuable information facilitating effective and efficient business decision-making. As Data Science is the next big thing in the tech world, learning about the same would be beneficial for -

- Data Engineer
- Hadoop/Big Data Professional
- BI/ETL/DW Professionals
- Data Analyst
- Dashboard/Reporting Expert
- Machine Learning/AI Expert
- Data Expert/Statisticians
- Business Analyst

## ELIGIBILITY/ PREREQUISITE

Good understanding of basic statistical concepts and a strong quantitative background.

Knowledge of any scripting languages such as Java, Perl, Python or R.

Knowledge and experience of SQL.





# TRENDS IN DATA SCIENCE + INDUSTRY VIEWS

"A top-level data scientist with extensive experience in the industry can earn as much as \$148,000 a year."  
Payscale.com

"Regardless of how things evolve, one thing is clear: Skilled data scientists, statisticians, and business analysts will be the key to unlocking the endless possibilities of big data."  
Devavrat Shah, co-director of the Data Science: Data to Insights

"Data science jobs in innovative industries like information technology can take twice as long to fill than the national benchmark average for B.A.+ jobs of 45 days."  
Burning Glass Technologies



# PROGRAM STRUCTURE



30 hours live online training with an Industry Expert Instructor



POC support and multiple assignments to gain thorough understanding





# PROJECT WORK

Learners are exposed to real world Data Science problems and building Machine Learning Models by engaging in project work on -

- Multiple linear regression and multiple logic regression
- Classification analysis using K nearest neighbors KNN and Random Forest
- Clustering using K means



# DETAILED CURRICULUM : MODULES

## **Data Science Introduction**

- Main objectives of a Data Science Project
- What you need to learn to become a Data Scientist?
- What are the opportunities and Prerequisites?
- Target Audience

## **Data Science Project Life Cycle**

- CRISP - DM Process Model
- CRISP - DM Phases

## **Basics of Statistics**

- Random Variable
- Central Tendencies - Mean Mode, Median
- Probability, Probability Distribution of Random Variables
- Type of Random Variables - Based on Scale of Measurement
- Variance & Standard Deviation

## **Advanced Statistics**

- Normal Distribution
- Standard Normal Distribution and Z-Score
- Binomial Distribution
- Poisson Distribution
- Inferential Statistics
- Sampling
- Sampling Distribution
- Central Limit Theorem

# DETAILED CURRICULUM : MODULES

- Sampling
- Sampling Distribution
- Central Limit Theorem
- Simulation
- Hypothesis and hypothesis Testing
- Type I and Type II Errors
- Hypothesis Testing using z-test
- Hypothesis Testing t-test

## **R Basics**

- Introduction to R Programming
- Data Structures in R
- Slicing and Dicing the data
- Control structure and Loops in R
- Basic Inbuilt R Functions
- User Defined Functions

## **Advanced R Programming**

- Apply Family of Functions
- Data Manipulation using 'dplyr' Package
- Graphics and Data Visualization in R
- Exploratory Data Analysis in R
- ggplot2 Package

# DETAILED CURRICULUM : MODULES

- Applied Statistics using R

## **Machine Learning**

- Supervised & Unsupervised ML
- Supervised ML Models
- Linear & Logistic Regression
- Regression methods
- Classification
- K Nearest Neighbours KNN
- Decision Tree
- Random Forest
- Unsupervised ML Models
- K Means Clustering
- Model Evaluation
- Under fitting and Overfitting
- Confusion Metrix
- K-Fold Cross Validation
- Regression Evaluation Metrics
- Time Series Analysis

## **Moving Average**

## **Exponential Smoothing**

## **AR, MA,ARMA,ARIMA**

- Support Vector Machine (SVM)
- Naïve Bayes



# DETAILED CURRICULUM : MODULES

## **DYNAMO DB**

Creating a Dynamo db, Configuring alarms, Adding data manually

## **PROJECT AND AWS CASE STUDY**

Creating and managing two tier application (WEB and DB), Creating and managing three tier application (APP, WEB and DB), Migrating on-premise application to Cloud, Best practices , Cost control strategies, Overview of AWS rectification

## **AWS TROUBLESHOOTING**

Troubleshooting EC2 instances, Troubleshooting using Cloud Watch, Troubleshooting using ELB, Using the Cloud Trail

# 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

Professionals skilled in Data Science are highly demanded in the market. Upon successful completion of this training, you will benefit one of the following profiles depending upon your experience and qualifications.

**DATA ENGINEER**

**DATA ANALYST**

**ADVANCE ANALYTICS PROFESSIONALS**

**MACHINE LEARNING EXPERT**

**DATA SCIENCE PROFESSIONAL**

**DATA SCIENTIST**



# TESTIMONIALS

## “**AURELIA ARNDELL, AUSTRALIA**

The state-of-the-art infrastructure of Cognixia allows the students to understand the applications of these methods and tools by getting hands-on experience working alongside real-time data scientists. Moreover, the support received from the trainer as well as the technical support team was quite commendable.

## “**MARC FOUST, SCOTLAND, UK**

The training program offered by Cognixia was excellent. The trainer resolved our entire query with the help of live demos and illustrations and the support received from the technical team were really commendable.

## “**PRANITA CHANDANKHEDE, INDIA**

The Data Science course helps in understanding the topics right from Big Data to Data Analytics Life Cycle. Moreover, the support received from the trainer as well as the technical support team was quite impressive.

## “**AMANDEEP MANN, USA**

It was a great learning experience for me. The trainer helped us with everything, no matter how simple or complex. He covered all the basics of Python and Data Science. I would love to get trained again with Cognixia. A big thanks to the instructor and Cognixia for carrying out the entire training so smoothly and lucidly.

## “**DESIREE LOCKHART, USA**

For beginners, the course on Data Science by Cognixia is a very useful one. I thoroughly enjoyed the course and have found it very, very useful in growing my career.



# Data Science Training



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