



ENIGMA CG
CONSULTING GROUP

ANALYTICS

TRAINING - NOV 2018

THAILAND
Bangkok

INTRODUCTION TO **“R”**
WORKSHOP - (19th - 20th November 2018)

MACHINE LEARNING USING **“R”**
WORKSHOP - (21st - 22nd November 2018)

ADVANCE MACHINE LEARNING USING **“R”**
WORKSHOP - (23rd - 26th - 27th November 2018)

INTRODUCTION TO **“PYTHON”**
WORKSHOP - (15th -16th November 2018)

MACHINE LEARNING USING **“PYTHON”**
WORKSHOP - (28th - 29th - 30th November 2018)

“CLOUDERA” DATA ANALYST TRAINING
(12th - 13th - 14th December 2018)

WHAT IS THIS COURSE ABOUT?

This course gets you started with R programming, one of the most favourite statistical programming language. You will learn about R programming interfaces, what are packages and learn to use various packages, how data is stored and referred, how to import various data formats in R. You will get introduced to some data preparation and explorations tasks. You would learn some advanced programming tasks like creating functions, looping and debugging. Finally, you will learn to visualize data in R.

WHO SHOULD ATTEND?

This is a level one program. Anyone who wants to enter into analytics/ data science or SAS/Python data science programmer who want to enrich with one more programming language.

PREPARATION

You must bring your own laptop, 64 bit, at least i3 core processor (i5 preferred). Instructions on installation of R would be sent you before the workshop. You need to follow those instructions to make your laptop ready before the class

COURSE OUTLINE:

Getting started with R

- Getting started with R and R Studio
- Getting Help in R
- Understanding data types and data structures in R

Getting data in R

- Accessing Data
- Data Preparation

Exploring data using R

- Data Exploration
- Working with data: imputation, transformations, recoding

Advanced programming in R

- Creating Functions
- Looping

Preparing reports

- Data visualization
- Exporting

WHAT IS THIS COURSE ABOUT?

Machine learning is the science of making computer machine self learn from the past experiences to improve on the task's outcome. There are many exciting real life examples of application of machine learning such as robotic vacuum cleaner, self-driving cars, face or speech recognition, effective web search and many more. In this course you will learn important machine learning concepts, types of machine learning algorithms, steps in the model building, testing and scoring and learn various packages and functionalities in R. You will get introduced to various supervised and unsupervised learning algorithms. Enough time is spent on understanding the concept behind each algorithm within case studies.

WHO SHOULD ATTEND?

You should have attended 'Introduction to R' course or know basic R commands for data import, preparation and exploration. If you are already familiar with basic maths concepts like linear algebra, matrices and stats concepts like probability, estimation, and this course would be easier for you to grasp. If you are interested to know more on what machine is learning, how to use machine learning, types of machine learning, and implementation of various algorithms to solve some of the business problems then, you should attend this two days course.

PREPARATION

You must bring your own laptop, 64 bit, at least i3 core processor (i5 preferred). Instructions on installation of R would be sent you before the workshop. You need to follow those instructions to make your laptop ready before the class.

COURSE OUTLINE:

Introduction to Machine Learning

- Intro to Predictive Modelling and Machine Learning
- Types of Machine Learning algorithms
- Understanding Basics
- Introduction to packages and functionalities used in R

Steps in the model building, testing and scoring

- Data Pre-Processing
- Model Evaluation Metrics
- Comparing Performance of Machine Learning Algorithms
- Tuning Machine Learning Algorithms
- Scoring

Supervised Learning algorithms

- Understanding Linear and non-linear algorithms
- Understanding Regression and Classification
 - Simple linear regression
 - Multiple linear regression
 - k nearest neighbors

Unsupervised Learning algorithms

- Understanding Clustering Association
 - k-means Clustering

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This course on the advanced techniques of more complex, linear, non-linear, and ensemble techniques.

WHO SHOULD ATTEND?

You should have attended 'Introduction to R' and 'Introduction to Machine Learning Using R' course or know basic R commands for data import, preparation and exploration as well know what are different machine learning techniques. You should have solved at least one case study on regression, classification, clustering and association mining. This course is for advancement of preliminary machine learning knowledge.

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PREPARATION

You must bring your own laptop, 64 bit, at least i3 core processor (i5 preferred). Instructions on installation of R would be sent you before the workshop. You need to follow those instructions to make your laptop ready before the class.

COURSE OUTLINE:

Linear Algorithms

- Multiple linear regression
- Logistic regression
- Linear Discriminant Analysis

Non-linear Algorithms

- Classification And Regression Trees
- Naïve byes
- Support Vector Machine

Ensemble Algorithms

- Random forest

Unsupervised learning algorithm:

- Clustering
- Association Rule mining

Retail Case Study:

Manager at SuperDuper Retail store wants to design the promotions and discounts for his store. He also wants to redesign the placements of items to increase



He wants to see how mining the associations between various product can help him to achieve this goal.

HR Case Study:

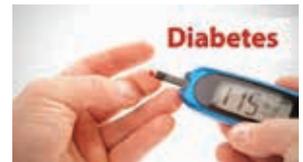
Human resources manager at talentica is very keen in understanding her employees better.



She plans for their career development activities like trainings, workshops, and nominating great performers to the international conferences. And practices strategies like fun events, family outings, promotion, perks as ways to retain employees. She wants to analyze factors that affects attrition.

Health care Case Study:

National Institute of Diabetes and Digestive and Kidney Diseases has medical records of females of 21 years or older and of Pima Indian heritage.



They want to predict whether the patient shows signs of diabetes according to World Health Organization criteria during routine medical care.

Telecom Case Study:

80% of the revenue is generated by the 20% of the customer who uses various telecom services like, phone calls, international calls, internet services and other value-added services most actively.



Revenue manager at Hello! Telecom company believes that, it is very important to predict the prospective customers who are likely to churn from the service provider through the usage pattern and the factors affecting their decision.

TESTIMONIALS

Testimonials:

The reason why I came to this program is to get to know about the new trend of people in the same field. And what I can see until now is my expectation were met. The program is very informative. I met a lot of people that inspired me today and I would recommend this program to anyone who is interested in analytics. Thank you very much for inviting me.

Etelka Dallon
Team Head of
Modelling and Measurement



It's not often that I attend data analytics conferences but I have to say it has been very eye-opening hearing a lot from across many different industries. I have to say that it's a wonderful chance to see whether we are doing is in the right direction. Also, at the same time, it's been an absolutely a refreshing to see other data specialists and scientists, gurus geeks make a difference in how they are transforming their businesses.

Amy Cheung – Aegon Insights



There are so many materials with very good speakers. When I joined this program, it feels like a very good opportunity for people who wants to practice analytics not only concept but also about application and practice. Thank you very much EnigmaCG for organizing this event.

Agus Laksono
Head of Data Scientist



It's a wonderful event, magnificent program with a lot of people attending from diverse background. Highly recommend for people from marketing and analytics.

Tamkeen Qureshi
VP Digital Analytics DTAC



This is the first time we have done a public event in Thailand. I have to say, it has been an excellent choice of event. The audiences consisted of not only from fantastic companies but also people within those companies that is real decision makers, real innovators. I am very happy with this event and will be back next year for sure.

Tim Young
VP Marketing



Previous Workshop Attendees

