

CERTIFICATION IN R

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Coimbatore:

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For Online Delivery inquiries:

1800-267-7679

PROGRAM HIGHLIGHTS



COMPREHENSIVE COVERAGE

The program offers comprehensive hands-on understanding of R, the market leader in business analytics. The curriculum is divided into two modules, Basic and Advanced R, and provides deep insights into Predictive, Text and Multivariate Analytics, Optimization using advanced statistical models, along with resume building and interview prep.



INDUSTRY-ALIGNED CURRICULUM

The program is extremely practical and hands-on, and endorses the use of live case studies and real-life case studies to deliver experiential learning. The program is designed and taught by experienced industry professionals who have 15+ years of experience. Their involvement encompasses curriculum design, guest lectures, knowledge sharing sessions and evaluation of student projects & case studies.



DELIVERY MODES

Choose between three delivery modes: 1) Classroom, 2) Online Instructor-led training, or 3) Self-paced Videos to serve your learning needs and ensure maximum learning efficacy. The Classroom and Virtual Class formats come with 15 hours of engaging Instructor videos. The third mode, Self-paced Videos, comes with 24 hours of engaging Instructor videos that you can consume at your own pace.



CAREER ASSISTANCE

The Imarticus Careers Assistance Services (CAS) team prepares you for successful careers in Business Analytics through extensive resume building, interview preparation, and group mock interviews with expert faculty to help you land your dream job.



24/7 LEARNING

Aside from your instructor-led lectures, we offer a fully integrated learning management system that provides 24/7 access to your learning material, assessments and study aids. This offers the added flexibility for knowledge advancement at your convenience.

CERTIFICATION IN R

The Certification in R program at Imarticus is a comprehensive, short-term program providing you with a thorough understanding of R, the world's leading analytics technology platform, for successful careers in Data Analytics and Data Science.

The program comes with a rigorous industry-aligned curriculum, and is available in three delivery formats to get you job-ready with the skills needed by the industry.

COVERAGE

- Basics of R
- Operations in R
- Data Manipulation
- Writing Functions
- Linear & Logistic Regression
- Computational Statistics
- Multivariate & Predictive Analysis
- Text Mining

WHY R?



**4 MILLION USERS
WORLDWIDE**

COST OF OWNERSHIP

R is an open source software that is free to download.

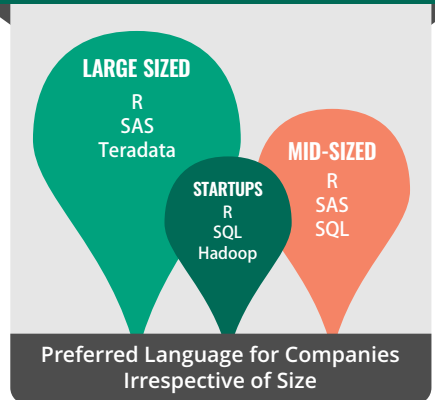
CUSTOMIZABLE

Data scientists can improve the software's code or write variations for specific tasks.

VERSATILITY

R is perhaps the only analytics software to run on MAC.

4 MILLION USERS WORLDWIDE



**HIGHEST PAID
IT SKILL**

Dice Survey,
Jan 2014

**MOST-USED DATA
SCIENCE LANGUAGE
AFTER SQL**

O'Reilly Survey,
Jan 2014

**70% OF DATA
MINERS USE R**

Rexer Survey,
Oct 2013

**RANKED #15 OF
ALL PROGRAMMING
LANGUAGES**

RedMonk Rankings,
Jan 2014

**GROWING FASTER
THAN ANY OTHER
DATA SCIENCE
LANGUAGE**

KDNuggets Survey,
Aug 2013

CURRICULUM

BASIC MODULE

INTRODUCTION TO R SOFTWARE	R Base Software Understanding CRAN RStudio The IDE Basic Building Blocks Sequence of Numbers Understanding Vectors Handling Missing Values Subsetting Vectors Matrices and Data Frames Logical Statements Lapply, sapply, vapply and tapply Functions
BASIC STATISTICS	What is Data? Meaning of Variables Data Types Measures of Central Tendency in Data Skewness in Data Measures of Dispersion Data Distribution
LINEAR REGRESSION	Covariance and Correlation in Data Multivariate Analysis Assumptions of Linearity Hypothesis Testing Limitations of Regression
CASE STUDY FOR LINEAR REGRESSION	Case for Prediction Problem
LOGISTIC REGRESSION	Reason for Using Logistic Regression The Logistic Transform Logistic Regression Modelling Model Optimisation Understanding the ROC Curve
CASE STUDY FOR LOGISTIC REGRESSION	Case for Prediction Problem
DECISION TREE	Classification Trees Regression Trees
CASE STUDY FOR DECISION TREE	Case for Prediction Case for Classification
SEGMENTATION	An Overview of Clustering Understanding the Working of Kmeans Algorithm Cluster Size Optimisation vs Definition Optimisation K- mediod and Fuzzy K means
CASE STUDY FOR SEGMENTATION	Case for Clustering on Bank Customer Data Set

ADVANCED MODULE

ASSOCIATION RULE MINING	Understanding Supervised vs. Unsupervised Learning Understanding Use of Recommendation Engines Understanding Top Up Shopper Vs Basket Shopper Concept of Association Rule Mining The Apriori Algorithm Demystifying Support, Confidence and Lift Parameters Reading the Rules
CASE STUDY FOR MARKET BASKET ANALYTICS	Case on Hyper Market Shoppers Dataset for MBA
TIME SERIES	Definition of Time Series Time Series Decomposition Simple & Weighted Moving Average Method Single, Double, Triple Exponential Smoothing Method AR Models MA Models ARMA Models ARIMA Models sARIMA Models Using RMSE and MAPE for Model Performance
CASE STUDY FOR TIME SERIES	Case on Automobile Sales Data for Time Series
K NEAREST NEIGHBOURS ALGORITHM FOR CLASSIFICATION WITH CASE STUDY	Lazy Learning Notion Computation of Distance Matrix The Optimum K Value Data Transformations as a Pre Processing Phase Model Building on Training Data Set Model Validation on Testing Data Set Evaluation of Model Advantages & Disadvantages of KNN Models
NAÏVE BAYES ALGORITHM FOR MULTI CLASS PREDICTIONS WITH CASE STUDY	Bayesian Theorem The Prior and Posterior Probabilities Conditional and Joint Probabilities Notion Traditional Approach - Extract Important Features Naive Approach - Independence of Features Assumption Data Processing - Discretization of Features Model Building / Testing
ARTIFICIAL NEURAL NETWORKS WITH CASE STUDY	Understanding Neural Networks The Biological Inspiration The Activation Function The Structure of Network The ANN Model Training the Model Testing and Validation
SUPPORT VECTOR MACHINES WITH CASE STUDY	Understanding SVM Concepts of Linearly seperable vs non seperable data Build the Model Training the Model Testing and Validation Tuning the Model
ENSEMBLE MODELS WITH CASE STUDY	Understanding Entropy Information Value Model Building on Training Data Set Selecting the Best Split in Data Pruning a Decision Tree Model Validation on Testing Data Set Improve Model Performance Bagging Trees Boosting Trees Random Forests
INTERVIEW PREPARATION	Resume Building Interview Preparation Panel Mock Interviews with Industry Veterans

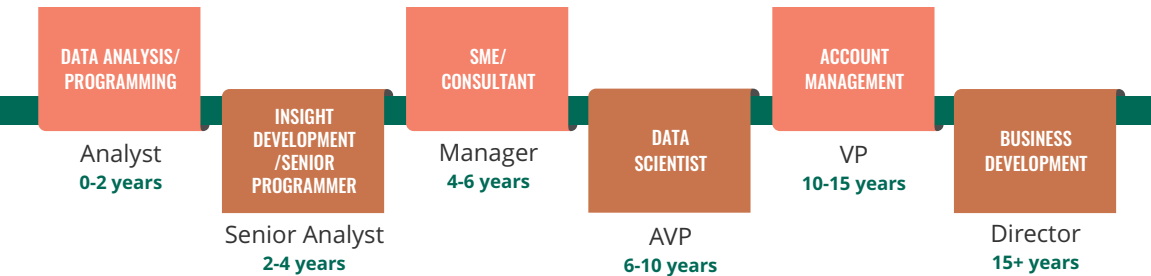
CASE STUDY & PROJECT-DRIVEN

The program features extensive use of real-life case studies, live data sets and Capstone projects to offer a deep understanding of R for applications in the real world.

- MARKET BASKET ANALYTICS
- ENSEMBLE MODELS
- TIME SERIES ANALYSIS
- SEGMENTATION
- LINEAR REGRESSION
- LOGISTIC REGRESSION
- NAÏVE BAYES ALGORITHM FOR MULTI CLASS PREDICTIONS
- SUPPORT VECTOR MACHINES

CAREERS IN ANALYTICS

Career Path



Global Firms that hire for Business Analytics

- Genpact
- Infosys
- Target
- Loews
- HSBC
- Fractal
- Cap Gemini
- Accenture
- Wipro Analytics
- Cognizant
- IBM
- HCL
- Citi Bank Analytics
- EXL
- Mu Sigma
- Latent View

AND MANY MORE...

CAREER ASSISTANCE



RESUME BUILDING

Refining and polishing your resume with critiques and constructive feedback, along with insider tips



INTERVIEW PREP

Honing your interview skills using our extensive databank of questions and interview prep sessions



MOCK INTERVIEWS

Preparing you to ace HR and technical interview rounds through rigorous group mock interviews with our faculty

FACULTY

Mohan Rai

Mohan has over 10 years of experience in Core Analytics (Sales & IT), and his primary expertise lies in Banking, Construction, Real Estate, Automobile, Component Manufacturing and Retail domains. He has extensive exposure to multiple verticals and roles such as Training, Research, Sales, Market Research, Business Consulting, Sales Planning, Market Strategy and IT. Mohan is a Director for S & R Analytics involved in Delivery of Analytics Consulting/Training and SIP Partners of TCS. He is also a visiting faculty for Analytics at various colleges and institutes. Mohan holds degrees in Business Analytics and Intelligence from IIM-Bangalore, MBA in Marketing and BSC in Statistics.

Yogesh Parte

Yogesh is a research engineer with over 14 years of experience in algorithmic development and proof of concept (PoC) demonstration using MATLAB, C/C++, Python and R. He is the Founder of Y P Consulting Services, which provides specialized services and software solutions in the field of innovation engineering and technology applications. Previously, he has worked as post-doctoral researcher at University of Paul Sabatier and a research & development engineer at Modartt S. A. in Toulouse, France. Yogesh holds a PhD. in Applied Mathematics from University of Paul Sabatier, France and has won over 30 awards for academic excellence.

PROGRAM DELIVERY

The program is delivered in three modes - Classroom, Online Instructor-led training and a fully self-paced Video Learning mode to cater to your learning preferences while ensuring maximum learning efficacy.

OPTION 1



CLASSROOM TRAINING [80 HOURS]

- Classroom training for 65 Hours by expert faculty who are certified by SAS Institute at a pre-determined time at any of our Imarticus centers
- The program also comes with 15 hours of engaging self-paced Instructor videos that you can watch before coming to class

OPTION 2



ONLINE INSTRUCTOR-LED TRAINING [65 HOURS]

- Live instructor-led virtual classes for 50 hours with expert faculty for real-time learning at a pre-determined time from the comfort of your own home
- The program also comes with 15 hours of engaging self-paced Instructor videos that you can watch before coming to class

OPTION 3



SELF-PACED VIDEOS [24 HOURS]

- 24 Hours of self-paced learning videos by our expert faculty to consume at your own pace as per your convenience.
- Unlimited access to HD videos on our learning portal for a period of 6 months