Data Analytics Course Using R Programming

IntelliPaat

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About the Program

Intellipaat's Data Analytics training course will help you be a master in data manipulation with R programming, data visualization, and advanced analytics topics such as regressions, data mining using RStudio, and more. During this R programming training, you will work on real-life projects and assignments to master Data Analytics. So, enroll in this best R programming certification course designed by experts.

About Intellipaat

Intellipaat is one of the leading e-learning training providers with more than 600,000 learners across 55+ countries. We are on a mission to democratize education as we believe that everyone has the right to quality education.

Our courses are delivered by subject matter experts from top MNCs, and our world-class pedagogy enables learners to quickly learn difficult topics in no time. Our 24/7 technical support and career services will help them jump-start their careers in their dream companies.

Key Features

40 HRS INSTRUCTOR-LED TRAINING

16 HRS SELF-PACED TRAINING

32 HRS REAL-TIME PROJECT WORK

LIFETIME ACCESS

24/7 TECHNICAL SUPPORT

INDUSTRY-RECOGNIZED CERTIFICATION

JOB ASSISTANCE THROUGH 80+ CORPORATE TIE-UPS

FLEXIBLE SCHEDULING

Career Support

SESSIONS WITH INDUSTRY MENTORS

Attend sessions from top industry experts and get guidance on how to boost your career growth

MOCK INTERVIEWS

Mock interviews to make you prepare for cracking interviews by top employers

GUARANTEED INTERVIEWS & JOB SUPPORT

Get interviewed by our 400+ hiring partners

RESUME PREPARATION

Get assistance in creating a world-class resume from our career services team

Why take up this course?

- 70% of companies say that Analytics is integral to making decisions – IBM Study
- 19% is the annual growth rate of the Analytics market – Pringle & Company
- R Programmers can earn more than US$110,000 per year – O'Reilly Survey

R programming is a statistical language for Data Analytics that is finding higher adoption rates today, thanks to its extensible nature. It can be widely deployed for various applications and can be easily scaled. Taking up this R programming for Data Analytics online course to learn R tool will hence help you grab high-paying jobs offered by top companies.

Who should take up this course?

Intellipaat's R for Data Analytics course is exclusively designed by industry experts for:

- Software Engineers and Data Analysts
- Business Intelligence Professionals
- SAS Developers wanting to learn the open-source technology
- Those aspiring for a career in Data Analytics

Program Curriculum

R Programming Course Content

INTRODUCTION TO R

R language for statistical programming, various features of R, introduction to RStudio, statistical packages, familiarity with different data types and functions, learning to deploy them in various scenarios, using SQL to apply the 'join' function, components of RStudio like the code editor, visualization and debugging tools, and learning about R-bind

R PACKAGES

R functions, code compilation and data in well-defined format called R Packages, R Package structure, package metadata and testing, CRAN (Comprehensive R Archive Network), vector creation, and variable value assignment

SORTING DATAFRAME

R functionality, the Rep function, generating repeats, sorting and generating factor levels, and transpose and stack functions

MATRICES & VECTORS

Introduction to matrix and vector in R, understanding various functions such as merge, strsplit, rowSums, rowMeans, colMeans, and colSums, matrix manipulation, sequencing, repetition, indexing, and other functions

READING DATA FROM EXTERNAL FILES

Understanding subscripts in plots in R, how to obtain parts of vectors, using subscripts with arrays, as logical variables, and with lists, and understanding how to read data from external files

GENERATING PLOTS

Generating plots in R: graphs, bar plots, line plots, and histograms and the components of a pie chart

ANALYSIS OF VARIANCE (ANOVA)

Understanding the analysis of variance (ANOVA) statistical technique, working with pie charts and histograms and deploying ANOVA with R, and one-way ANOVA and two-way ANOVA

K-MEANS CLUSTERING

K-means clustering for cluster and affinity analysis, cluster algorithm, cohesive subset of items, solving clustering issues, working with large datasets, association rule mining, affinity analysis for data mining, and analysis and learning co-occurrence relationships

ASSOCIATION RULE MINING

Introduction to association rule mining, various concepts of association rule mining, various methods to predict relations between variables in large datasets, algorithm and rules of association rule mining, and understanding single cardinality

REGRESSION IN R

Understanding simple linear regression, various equations of line, slope, etc., y-intercept regression line, deploying analysis using regression, the least square criterion, interpreting the results, standard error, and the measure of variation

ANALYZING RELATIONSHIP WITH REGRESSION

Scatter plots, two-variable relationship, simple regression analysis, and the line of best fit

ADVANCED REGRESSION

Deep understanding of the measure of variation, the concept of co-efficient of determination, F-test, the test statistic with an F-distribution, advanced regression in R, and the prediction of linear regression

LOGISTIC REGRESSION

Logistic regression meaning and logistic regression in R

ADVANCED LOGISTIC REGRESSION

Advanced logistic regression, how to do prediction using logistic regression, ensuring if the model is accurate, understanding sensitivity and specificity, confusion matrix, ROC, a graphical plot illustrating the binary classifier system, and the ROC curve in R for determining sensitivity/specificity trade-offs for a binary classifier

RECEIVER OPERATING CHARACTERISTIC (ROC)

Detailed understanding of ROC, area under the ROC curve, converting the variable, data set partitioning, understanding how to check for multicollinearity, how two or more variables are highly correlated, building a model, advanced dataset partitioning, interpreting the output, predicting the output, detailed confusion matrix, and deploying the Hosmer-Lemeshow test for checking whether the observed event rates match the expected event rates

KOLMOGOROV–SMIRNOV CHART

Data analysis with R, understanding the Wald test, MC Fadden's pseudo R-squared, the significance of the area under the ROC curve, and the Kolmogorov–Smirnov chart, which is a non-parametric test of one-dimensional probability distribution

DATABASE CONNECTIVITY WITH R

Connecting to various databases from the R environment, deploying ODBC tables for reading data, and visualizing the performance of the algorithm using the confusion matrix

INTEGRATING R WITH HADOOP

Creating an integrated environment for deploying R on the Hadoop platform, working with R and Hadoop, RMR package, and R Hadoop integrated programming environment, R programming for MapReduce jobs, and Hadoop execution

R CASE STUDIES

- Logistic Regression Case Study

  In this case study, you will get a detailed understanding of the advertisement spends of a company that will help drive more sales. You will deploy logistic regression to forecast the future trends, detect patterns, uncover insights and more, all through the power of R programming. Due to this, the future advertisement spends can be decided and optimized for higher revenues.

- Multiple Regression Case Study

  You will understand how to compare the miles per gallon (MPG) of a car based on various parameters. You will deploy multiple regression and note down the MPG for the car make, model, speed, load conditions, etc. It includes model building, model diagnosis, and checking the ROC curve, among other things.

- Receiver Operating Characteristic (ROC) Case Study

You will work with various datasets in R, deploy data exploration methodologies, build scalable models, predict the outcome with the highest precision, diagnose the model that you have created with various real-world data, check the ROC curve, and more.

Project Work

R Programming Projects

Project 1

Domain: Restaurant Revenue Prediction

Dataset: Sales

Project description: This project involves predicting the sales of a restaurant on the basis of certain objective measurements. This project will give real-time industry experience in handling multiple use cases and deriving the solutions. This project gives insights into feature engineering and selection.

Project 2

Domain: Data Analytics

Project description: The project is meant to predict the class of a flower using its petals' dimensions.

Project 3

Domain: Finance

Project description: The project aims to find the most impacting factors in the preferences of the pre-paid model and to identify which all are the variables that highly correlate with these factors.

Project 4

Domain: Stock Market

Project description: This project focuses on Machine Learning by creating a predictive data model to predict future stock prices.

Certification

After the completion of the course, you will get a certificate from Intellipaat.

Success Stories

Kevin K Wada

Thank you very much for your top-class service. A special mention should be made for your patience in listening to my queries and giving me a solution, which was exactly what I was looking for. I am giving you a 10 on 10!

Vaishnavi Vyas

Hello! The technology which I learned from Intellipaat was Data Analytics with R. Tutors were remarkable, and they are from the industry, so all the concepts were explained keeping the industry needs in mind. Excellent service from the support team as well. To sum it up, it was a good learning experience.

Sundararaman Radhakrishnan

The course provides value for money if you would like to hear in short. Before joining Intellipaat, I surfed a lot of online Data Analytics teaching academies. Intellipaat was one of them. One fine day, I got a call from Intellipaat's course advisor, who guided me on what I have to learn to make a successful career. Then my learning started! Intellipaat is definitely good compared to others. A few unique features they provide are lifetime access to the class and course materials and anytime support, which is really good. I have personally experienced it. Whenever I asked a doubt, I got the answer quickly. Overall, I would say that this is a great platform to learn Data Analytics on a pretty good budget.

Sampson Basoah

The course content of this R for Data Analytics training was thoroughly prepared, updated, and taught by the instructor in-depth. It was taught in a step-by-step manner. I was a beginner in the field of Data Analytics, but this course helped me become proficient in the field.

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