

DATA SCIENCE WITH R

Course Outline





Program Overview:

The Data Science with R Certification course enables you to take your data science skills into a variety of companies, helping them analyze data and make more informed business decisions. The course covers data exploration, data visualization, predictive analytics, and descriptive analytics techniques with the R language. You will learn about R packages, how to import and export data in R, data structures in R, various statistical concepts, cluster analysis, and forecasting.

Program Features:

- 64 hours of applied learning
- 10 real-life industry projects
- Dedicated mentoring session from faculty of industry experts
- Lifetime access to self-paced learning

Prerequisites:

There are no prerequisites for this Data Science Certification with R programming course. If you are a beginner in data science, this is one of the best courses to start with.

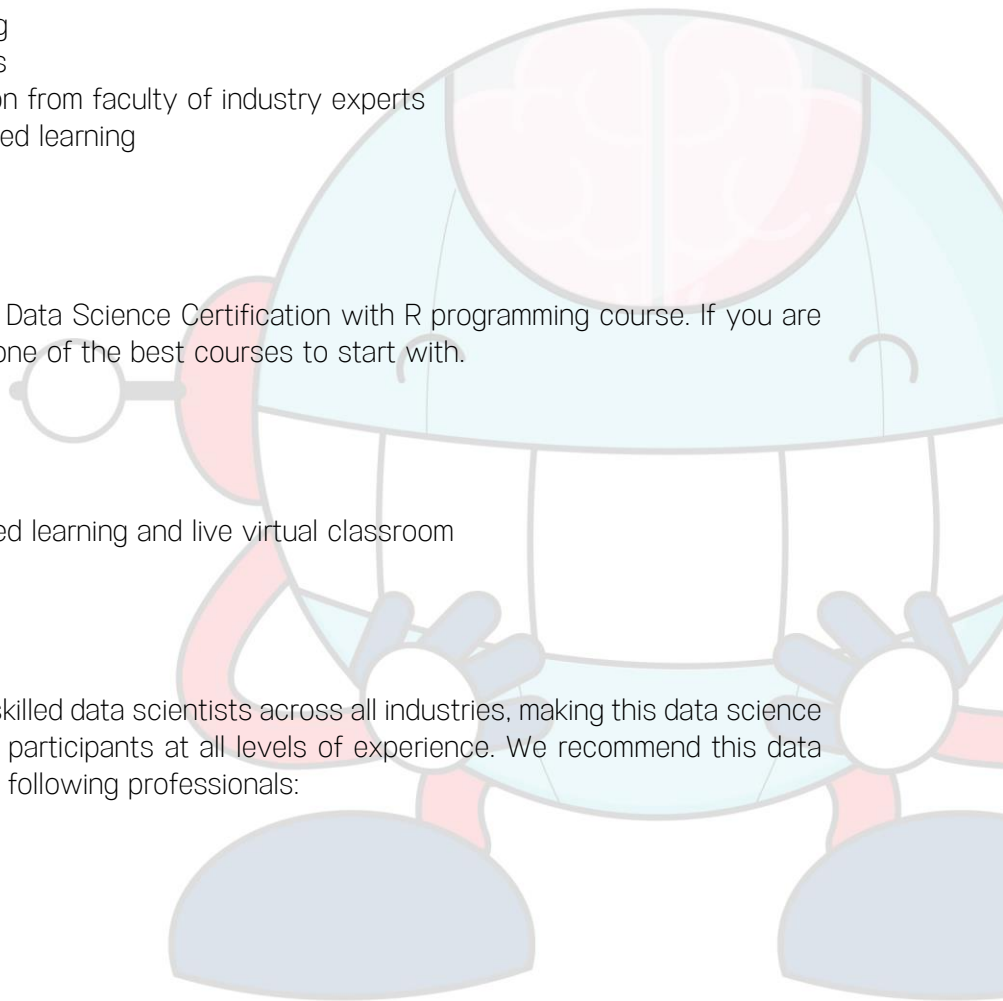
Delivery Mode:

Online Bootcamp - Online self-paced learning and live virtual classroom

Target Audience:

There is an increasing demand for skilled data scientists across all industries, making this data science certification course well-suited for participants at all levels of experience. We recommend this data science training particularly for the following professionals:

- IT professionals
- Analytics Professionals
- Software developers





Key Learning Outcomes:

When you complete this data science course, you will be able to accomplish the following:

- Gain a foundational understanding of business analytics
- Install R, RStudio, workspace setup, and learn about the various R packages
- Master R programming and understand how various statements are executed in R
- Gain an in-depth understanding of data structure used in R and learn to import/export data in R
- Define, understand and use the various apply functions and DPLYR functions
- Understand and use the various graphics in R for data visualization
- Gain a basic understanding of various statistical concepts
- Understand and use the hypothesis testing method to drive business decisions
- Understand and use linear and non-linear regression models, and classification techniques for data analysis
- Learn and use the various association rules with the Apriori algorithm
- Learn and use clustering methods including k-means, DBSCAN, and hierarchical clustering

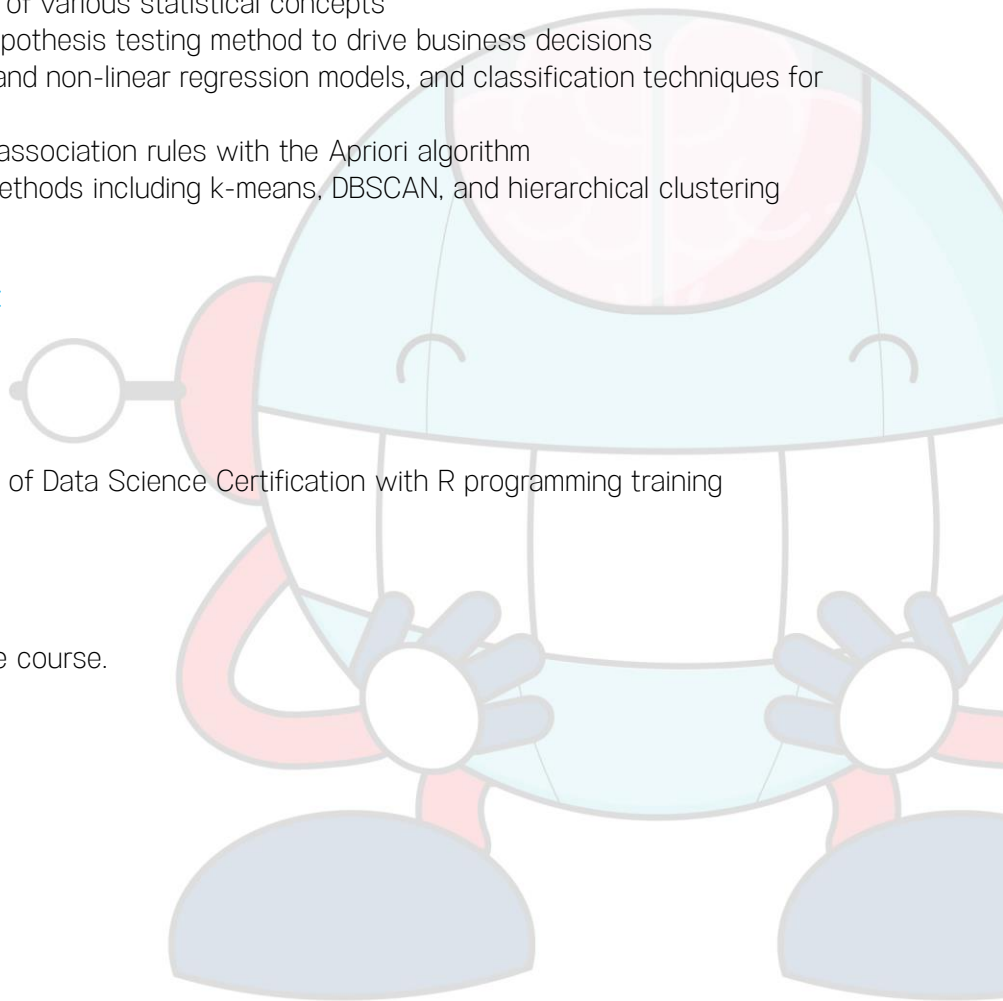
Certification Details and Criteria:

Online Classroom

- Attend one complete batch of Data Science Certification with R programming training
- Complete one project

Online Self-Learning

- Complete 85 percent of the course.
- Complete one project





Course Curriculum:

Lesson 1: Introduction to Business AnalyticsThe Course Overview

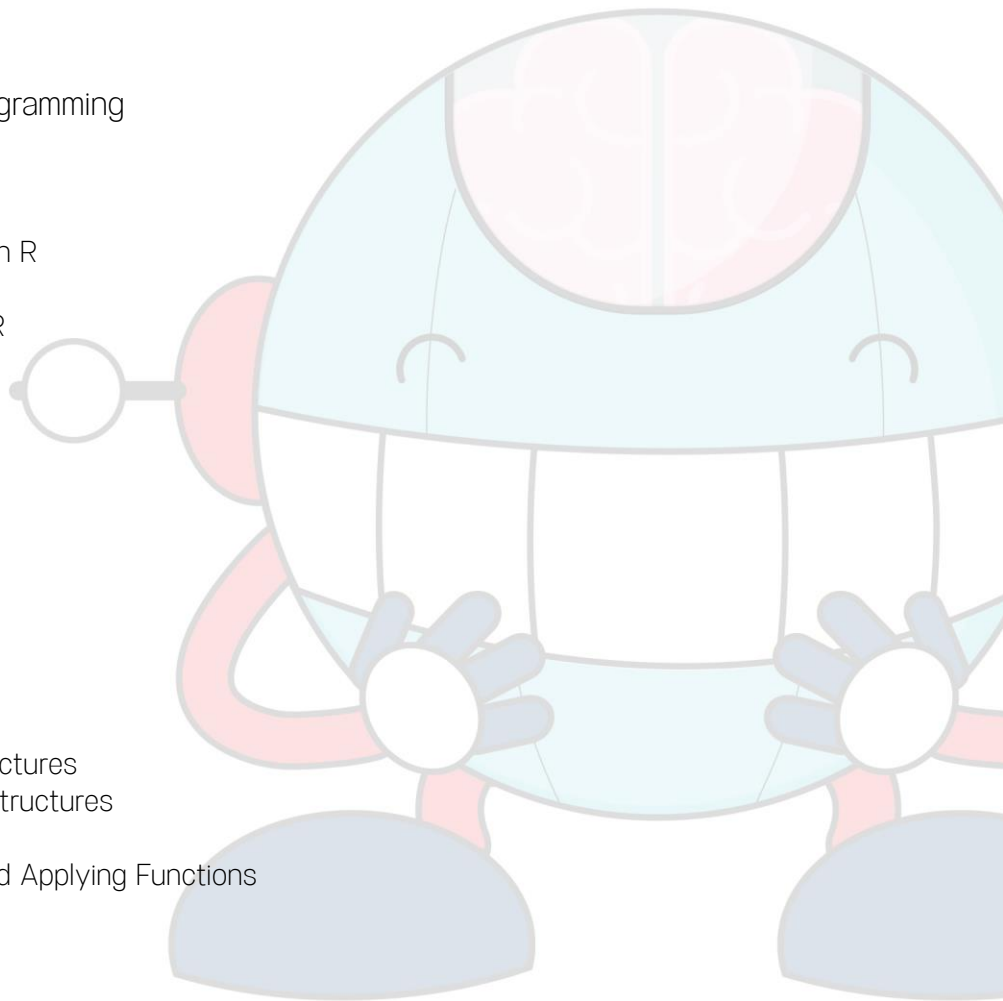
- Overview
- Business Decisions and Analytics
- Types of Business Analytics
- Applications of Business Analytics
- Data Science Overview
- Conclusion
- Knowledge Check

Lesson 2: Introduction to R Programming

- Overview
- Importance of R
- Data Types and Variables in R
- Operators in R
- Conditional Statements in R
- Loops in R
- R script
- Functions in R
- Conclusion
- Knowledge Check

Lesson 03: Data Structures

- Overview
- Identifying Data Structures
- Demo: Identifying Data Structures
- Assigning Values to Data Structures
- Data Manipulation
- Demo: Assigning Values and Applying Functions
- Conclusion
- Knowledge Check





Lesson 04: Data Visualization

- Overview
- Introduction to Data Visualization
- Data Visualization Using Graphics in R
- Ggplot2
- File Formats of Graphic Outputs R
- Conclusion
- Knowledge Check

Lesson 05: Statistics for Data Science-IThe Course Overview

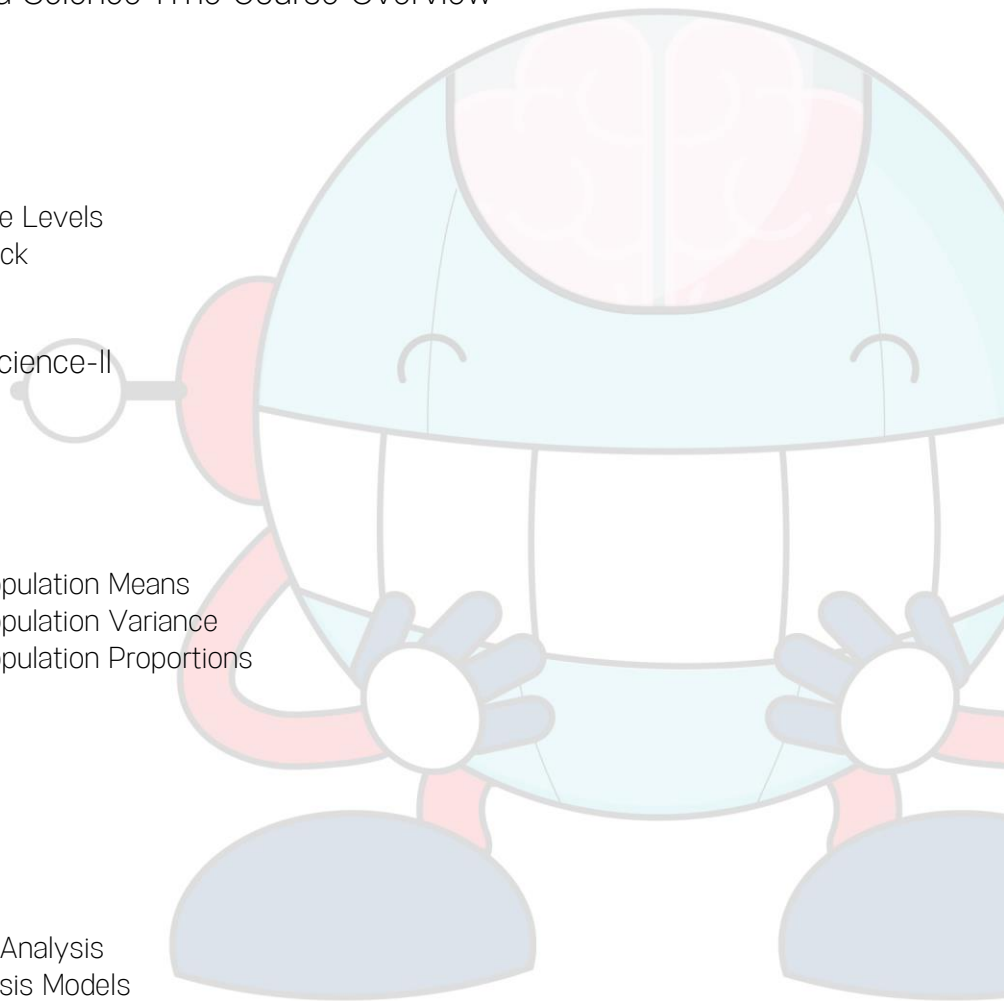
- Overview
- Introduction to Hypothesis
- Types of Hypothesis
- Data Sampling
- Confidence and Significance Levels
- Conclusion Knowledge Check

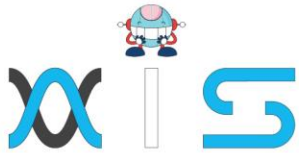
Lesson 06: Statistics for Data Science-II

- Overview
- Hypothesis Test
- Parametric Test
- Non-Parametric Test
- Hypothesis Tests about Population Means
- Hypothesis Tests about Population Variance
- Hypothesis Tests about Population Proportions
- Conclusion
- Knowledge Check

Lesson 07: Regression Analysis

- Overview
- Introduction to Regression Analysis
- Types of Regression Analysis Models





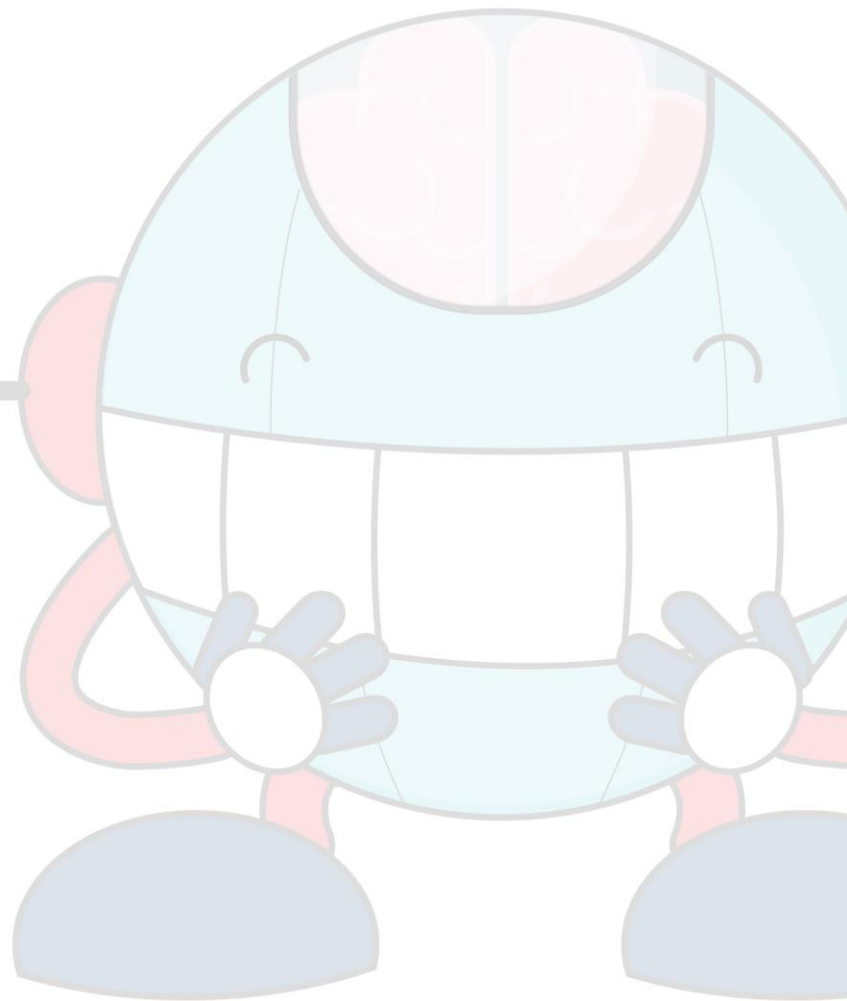
- Linear Regression
- Demo: Simple Linear Regression
- Non-Linear Regression
- Demo: Regression Analysis with Multiple Variables
- Cross Validation
- Non-Linear to Linear Models
- Principal Component Analysis
- Factor Analysis
- Conclusion
- Knowledge Check

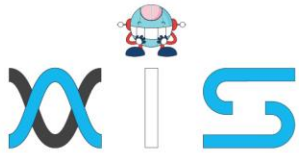
Lesson 08: Classification

- Overview
- Classification and Its Types
- Logistic Regression
- Support Vector Machines
- Demo: Support Vector Machines
- K-Nearest Neighbours
- Naive Bayes Classifier
- Demo: Naive Bayes Classifier
- Decision Tree Classification
- Demo: Decision Tree Classification
- Random Forest Classification
- Evaluating Classifier Models
- Demo: K-Fold Cross Validation
- Conclusion
- Knowledge Check

Lesson 09: Clustering

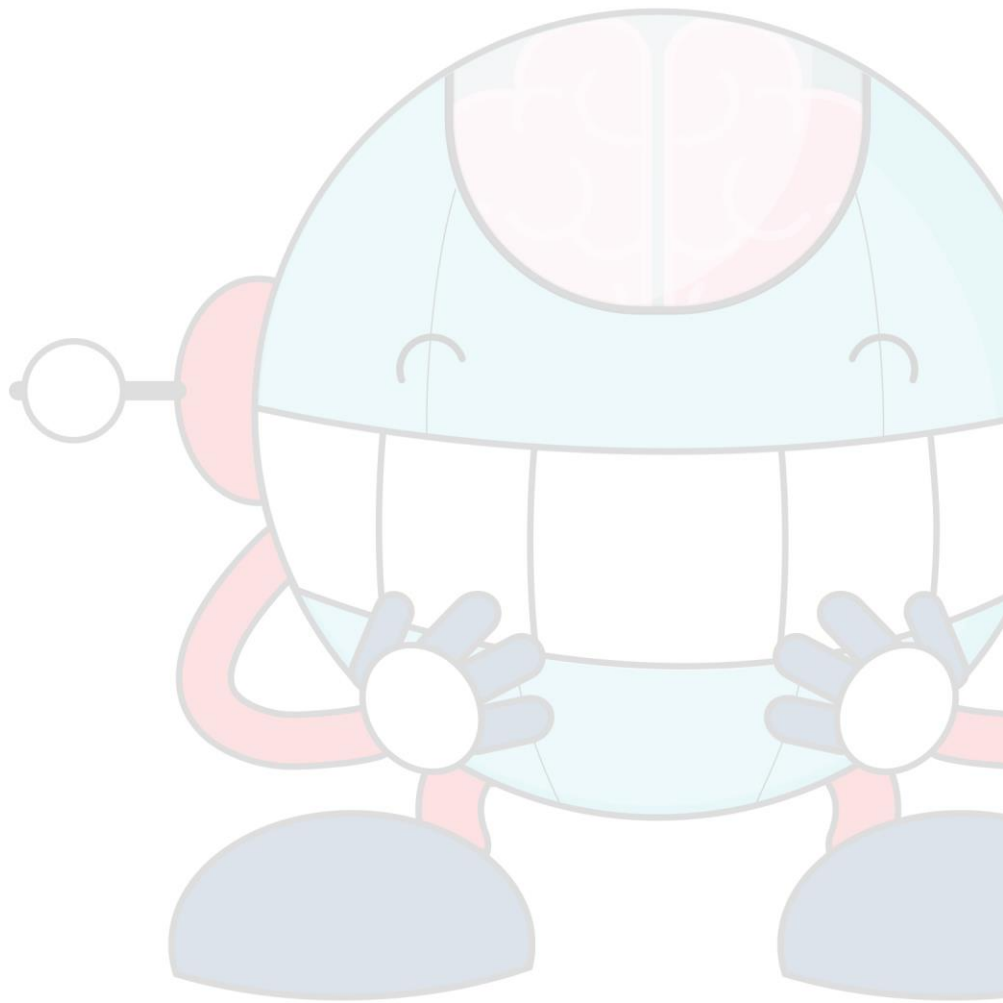
- Overview
- Introduction to Clustering
- Clustering Methods
- Demo: K-means Clustering
- Demo: Hierarchical Clustering
- Conclusion
- Knowledge Check

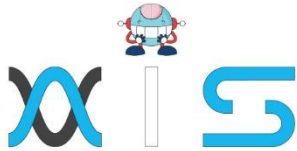




Lesson 10 - Association

- Overview
- Association Rule
- Apriori Algorithm
- Demo: Apriori Algorithm
- Conclusion
- Knowledge Check





AIS

With the rising demand in scalable technology, AIS provides tailored goal-setting based on your organization's needs and expectations. With products geared towards the growing needs of your organization's customers and employees, AIS has innovative and value-driven solutions.

Learning Partners



SAS Management, Inc.

SAS Management, Inc. has been a leader in the training, certification and consulting services industry in the Philippines. With offices in Makati, Ortigas and Cebu, Philippines, the company has been the top training and consulting company for over 9 years. In its years of existence, it has provided certificates to over 100,000 professionals including 10,000 participants in the 160+ courses that have been conducted just during the 2020-2021 pandemic alone. The most sought-after courses being offered are ITIL, Project Management Professional (PMP)®, COBIT 5, Six Sigma Yellow Belt, Six Sigma Green Belt, PRINCE2, and organizational skills, among others.



Simplilearn

Simplilearn, based in California and India, is the world's #1 online bootcamp and one of the world's the leading certification and training providers. Simplilearn trained over 2,000,000 professionals with 2,000+ trainers and provides over 400 different courses.

Technology Partner

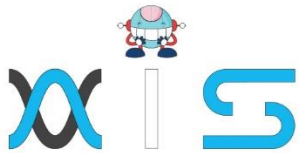


Freshworks

With over 40,000 customers, Freshworks is a business solutions software provider with products ranging from IT helpdesk and service desk, customer relationship management, live chat, marketing automation, phone system, and HR.

Partners & Affiliates





The program presented, as well as a wide range of programs are products of the partnership of AIS, SAS Management, Inc., and Simplilearn. With a common goal of providing the best practice of facilitating learning with an array of choices available in the online platform in this time of digitization.

Office Addresses

NXT AIS Inc.

Juan Antonio III Building
315 Maysilo Circle, Mandaluyong, Philippines

SAS Management, Inc.

- **Head Office**

Unit 1602 Cityland 10 Tower
2 6815 HV dela Costa cor Ayala Avenue
Makati City, Philippines

- **Branch Office**

Unit 204 Villa Building
Jupiter St. corner Makati Avenue
Makati City, Philippines

- **Branch Office**

Room 201 2nd floor OLS Building
443 Gorordo Avenue., Brgy. Kamputhaw
Cebu City, Philippines

- **Branch Office**

Malaysia - SAS Management
Sdn Bhd 6f-16, IOI Business Park,
Persiaran Puchong Jaya
47170, Selangor

Simplilearn

- **Simplilearn Americas, Inc Pvt Ltd.**

201 Spear Street, Suite 1100,
San Francisco, CA 94105 United States

- **Simplilearn Solutions Pte Ltd.**

NALANDA 53/1 C, Manoj Arcade, 24th Main Rd,
Sector 2, HSR Layout, Bengaluru
560102, Karnataka, India.

- **Simplilearn Singapore**

#14-302, The Plaza, 7500A Beach Rd,
Singapore 199591