INTERNATIONAL DATA SCIENCE PROGRAM

Ramaq Chools
Consulting &Training

Email: info@ramaqchools.com **Phone:** +966536834733 **Website:** ramaqchools.com

CONTENTS

INTRODUCTION TO DATA SCIENCE

Hey there, aspiring data scientist! Data science is an interdisciplinary field that uses statistical and computational methods to extract insights and knowledge from data. With its wide range of applications in various industries, data science is a rapidly growing field. Our comprehensive curriculum, hands-on projects, and expert guidance will equip you with the skills to excel in this dynamic domain.

Why Choose Chools?

Numbers That Speak for Themselves:

- 10,000+ Successful Alumni: Join a network of impactful professionals.
- 95% Job Placement Rate: Secure your future with Chools' proven track record.
- 20+ Years of Excellence: Trust in a legacy of education and industry expertise.
- 200+ Industry Partnerships: Leverage our connections for real-world insights and opportunities.

What Sets Us Apart?

- Expert Instructors: Learn from industry veterans with hands-on experience.
- Hybrid Learning Model: Balance online flexibility with in-person engagement.
- Comprehensive Curriculum: Stay ahead with courses designed to meet market demands.
- Community and Networking: Be part of an active community of learners and professionals.

Who Can Apply?

Eligibility Criteria:

- **Eligibility Criteria**: Bachelor's degree in any subject, preferably with a STEM background. Good command of English.

- **Ideal Candidates**: Professionals looking to pivot to a data science role, graduates aiming to enhance their employability, and individuals passionate about extracting insights from data.

Program Overview

The International Data Science Program at Chools is designed to provide a comprehensive education in data science, combining theoretical knowledge with practical, hands-on experience. Our program is structured into four progressive stages, each building on the previous one to ensure a deep and thorough understanding of the field.

Learning Mode:

- **Hybrid Learning Model:** Combines online learning with in-person sessions for flexibility and interactive engagement.
- **Interactive Sessions:** Includes live webinars, workshops, and Q&A forums with expert instructors and peers.
- **Self-paced Learning:** Access course materials anytime, allowing you to learn at your own pace.

Skills Learned

- Data Wrangling: Cleaning and preparing data for analysis.
- Data Visualization: Creating compelling visual narratives from data.
- Statistical Inference: Making data-driven decisions.
- Regression Modeling: Predictive modeling techniques.
- Machine Learning: Supervised and unsupervised learning methods.
- Big Data Technologies: Hadoop and Spark for handling large datasets.
- Cloud Computing: Using cloud platforms for data storage and processing.
- Data Ethics: Understanding responsible data use.
- Data-driven Decision Making: Informing business strategies.
- Data Engineering: Developing data pipelines and integrating systems.

Job Positions and Opportunities

- Career Paths: Data Scientist, Data Analyst, Machine Learning Engineer, Data Engineer, Business Intelligence Analyst, Analytics Consultant, Data Visualization Specialist.
- Industry Demand: High demand across sectors, competitive salaries, and growth opportunities.

Key Industry Verticals

- Where Your Skills Are Needed: Finance, Healthcare, Retail, Technology, Marketing, Manufacturing, Energy, Education, Telecommunications, Logistics and Supply Chain, Government and Public Services.

Program Objectives

- Master technical skills in data science.
- Utilize data visualization tools efficiently.
- Apply statistical methods.
- Tackle real-world data issues.
- Grasp data ethics principles.
- Foster continuous learning.
- Promote teamwork.
- Prepare for high-level data science roles.

Expected Outcomes

- Proficiency in data science and visualization tools.
- Practical experience through hands-on projects.
- Strong analytical thinking abilities.
- Ethical data practices application.
- Innovation in data-driven solutions.

PROGRAM OUTLINE

Stage 1: Fundamentals of Data Science

1. Introduction to Data Science
o Core principles, tools, and industry applications.

2. Basics of Data Wrangling
o Data cleaning, preparation, and real-world applications.

3. SQL for Data Management
o Database design, querying, and data management fundamentals.

4. Python Programming for Data Science
o Python syntax, data types, and libraries for data analysis.

Stage 2: Advanced Analytical Tools

5. Advanced Excel Techniques
o Data cleaning, pivot tables, macros, and automation.

6. Data Visualization with Tableau
o Interactive visualizations, dashboards, best practices.

7. Business Statistics and Probability
o Descriptive/inferential statistics, probability, hypothesis testing.

8. Intermediate Python for Data Analysis
o Pandas, Matplotlib, advanced data manipulation.

Stage 3: Practical Applications

9. Data Cleaning and Preprocessing
o Techniques for cleaning data, feature engineering, quality assurance.

10. Exploratory Data Analysis (EDA)
o Data distributions, pattern identification, visualization.

11. Advanced Data Visualization Techniques
o Dynamic visualizations, storytelling with data.

12. Statistical Inference and Modeling
o Regression models, hypothesis tests, real-world applications.

Stage 4: Capstone Project

13. Integration of Learned Skills
o Apply tools and techniques to real-world problems, comprehensive solutions.

14. Advanced Machine Learning Algorithms
o Ensemble methods, clustering, neural networks, deep learning.

15. Time Series Analysis
o Forecasting, trend analysis, seasonal decomposition.

PROGRAM OUTLINE

16. Natural Language Processing (NLP)
o Text preprocessing, sentiment analysis, topic modeling.

Elective Modules

17. Data Ethics and Privacy
o Ethical considerations, privacy laws, compliance strategies.

18. Machine Learning Fundamentals
o Supervised/unsupervised learning, model training and evaluation.

19. Advanced SQL Techniques
o Complex queries, stored procedures, performance optimization.

20. Big Data Technologies
o Hadoop, Spark, distributed computing, practical applications.

21. Predictive Analytics
o Regression analysis, time series forecasting, model validation.

22. Data Mining
o Clustering, classification, knowledge discovery.

23. Data-Driven Decision Making
o Decision support systems, business intelligence tools.

24. Cloud Computing for Data Science
o Cloud platforms, data storage, scalable solutions.

25. Data Engineering
o Data pipelines, ETL processes, integration technologies.

Enrollment Now Open!

Take the first step towards a data-driven future. Join our International Data Science Program and become a certified data scientist with Chools.

Email: info@ramaqchools.com **Phone:** +966536834733 **Website:** ramaqchools.com