

# Certified Professional Data Scientist (CPDS)



Exam Guide: CPDS-3.11



## Introduction

The Certified Professional Data Scientist Exam (CPDS) is a premier certification meticulously designed for professionals endeavouring to affirm and exhibit their profound expertise in data science, scrutinizing candidates on a broad spectrum of advanced data science concepts and practical applications within this multidisciplinary field.

## Exam Topics

### Module 1: Advanced Statistical Analysis:

- Mastery in employing statistical theories and methods to analyse, interpret, and visualize data for informed decision-making.
- Proficient application of hypothesis testing, regression analysis, and other statistical techniques in addressing real-world data problems.

### Module 2: Machine Learning and Predictive Modeling:

- Proficiency in designing, training, evaluating, and deploying machine learning models to solve complex business problems.
- Comprehensive understanding of supervised, unsupervised, and deep learning learning paradigms, alongside various machine learning algorithms and their practical applications.

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### Module 3: Big Data Technologies:

- Proficient handling and analysis of big data using cutting-edge technologies like Hadoop, Spark, and other distributed computing environments.
- Experience with big data storage systems, and advanced querying techniques using SQL and NoSQL databases.

### Module 4: Data Wrangling and Pre-processing:

- Advanced skills in data cleansing, transformation, and pre-processing to prepare datasets for analysis and machine learning tasks.
- Proficiency in using various data wrangling tools and libraries for effective data pre-processing and feature engineering.

### Module 5: Natural Language Processing and Computer Vision:

- Practical expertise in implementing NLP and computer vision techniques to extract insights from unstructured data.
- Experience with deep learning frameworks and modern architectures for NLP and computer vision tasks.

### Module 6: Data Visualization and Communication:

- Mastery in creating intuitive, interactive, and insightful visualizations to convey complex data insights to non-technical stakeholders.
- Effective communication of data-driven findings and recommendations through compelling storytelling and visualization techniques.

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### Instructions to candidate for Online Examination

**These instructions are crucial for the candidate to review before the commencement of the Online exam:**

- Candidates will receive the examination link via their email
- The examination link will be distributed on the last training day, but if it falls on a public holiday or weekend, it will be shared on the subsequent working day.
- Candidates are required to take the exam within 1 year after purchasing the exam without requesting any extension.
- Information regarding internet connectivity and examination instructions will accompany the examination link.

#### Examinations:

- After login, please fill out the requested details.
- For Multiple Choice Questions, candidates should select only one correct answer.
- The passing criteria will be displayed on the examination screen for the respective exam.
- The total examination duration will also be displayed on the screen.
- Candidates in need of special assistance should notify our office at least 7 days in advance.
- Before final submission, candidates will have the opportunity to review and amend their answers.
- Reviewing answers post submission is not permitted.
- This examination is an open book format. Answers will only be saved upon clicking the final submit button.
- There is no negative marking system applied in this examination.
- The IPYQB CPPD has two retakes for free if the candidate failed in the first attempt.
- For a 4th attempt, candidates will be required to pay the fee as communicated by IPYQB.
- IPYQB reserves the right to consider any examination with suspected copying as null and void during the evaluation or review of the answer sheet while declaring the results.
- Any name changes post certificate issuance will incur additional charges.