Program Overview

Fundamentals of Machine Learning

1. **About the course:**

   In this course, students will have a good understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc. understanding of the strengths and weaknesses of many popular machine learning approaches. Appreciate the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms of supervised and un- supervised learning. Students will be able to design and implement various machine learning algorithms in a range of real-world applications.

2. **Course Objective:**

   - Design and applying the machine learning techniques for real time data
   - Learning build data processing for Machine Learning Models
   - Creating data models which can predict the outcomes of a business.
   - Learning latest Industry 4.0 Technologies

3. **Job Opportunities:**
   - MIS Analyst
   - Assistant Manager- Analytics
   - ML Engineer
   - Data Mining Engineer
   - Data Scientist

4. **Course Outcomes**:
   Upon the successful completion of this course, the student will be able to:

   - Select real-world applications that needs machine learning based solutions.
   - Implement and apply machine learning algorithms.
   - Select appropriate algorithms for solving a particular group of real-world problems.
   - Recognize the characteristics of machine learning techniques that are useful to solve real-world problems.

5. **Medium of Instruction or recording:** Hindi and English

6. **Minimum Eligibility:** 12th pass or its equivalent from a recognized Board or University.

7. **Pre-requisite:**

- Any Bachelors degree with Math or Statistics or programming language computer as a paper or Any B.E / B.Tech students & working professionals.
- Basic working knowledge of Computers

8. **Duration:** - 60 days

9. **Common Pre-requisites:**

Hardware (**Minimum Specification):**

- Processor: Intel i58[th] Generations or Higher
- RAM: 8GB
- Graphic Card: Not Required
- Storage: 256 GB

Software
- Anaconda Software
- Knowledge in subjects like Machine Learning, statistics
- Should have some basic knowledge on Python Programming.
- Passion for Excel and online learning
- OS: Windows* Linux* macOS*

10. **Course Break-up:**
    This course is delivered as a blended program. It means it includes Recorded sessions and Live Sessions as well. The duration of each topic (Live or Recorded) varies, depending of the nature and need of the topic.

Course Break-up			
S. NO.	Mode of Delivery	No. of Sessions	Total Duration
1.	Recorded Session	57	647 Mins.
2.	Live Session	4	480 Mins.
3.	Assignment	1	120 Mins.
4.	Assessment (Quiz)	7	140 Mins. (Ideal time)
5.	Total	69	23 Hrs. 20 Mins.

11. **Qualifying Marks:**
    To get the certificate of completion, a student needs to obtain minimum 40 % aggregate marks.

12. **Assessment:**
    Assessment of each student will be done on the basis of their score in Quizzes, assignment submitted, presence and interaction in live classes and finally completion of the course within the stipulated time period or before the expiry of their validity. Assessment and marking in assignments and live classes is done by the faculties of Boston Training Academy.

13. **Assignment Submission Deadline:**

On or before 7 days from release of assignment.

14. Grading: The grades are allocated as follows.

Grading Criteria		
S. No.	Marks Obtained	Grade
1.	90% and above	A+
2.	80% - 90%	A
3.	70% - 80%	B+

4.	60% - 70%	B
5.	50% - 60%	C+
6.	40 - 50%	C
7.	Less than 40%	Fail

15. **Certification:** Certificate of completion is provided jointly by CSC Academy and Boston Training Academy.