Advanced Machine Learning

Learning Instruments

There are various instruments of learning that are important to be used effectively together.

The following learning instruments are similar to the ones in the previous course:

1. Video Lectures form the foundation of learning material for this course. The lectures are designed from a business application perspective to help you utilize the statistical tools to solve various business problems using Python.

2. Test Your Understanding quizzes are interspersed with video lectures to nudge you to check your grasp on the concepts covered in the videos watched and will be helpful in tracking your progress along the course.

3. The hands-on notebooks and associated datasets can be found at the start of each week's module.

4. The graded elements of the course include the following:

- 3 quizzes, one due each week
- 1 hands-on project

5. There will be 4 mentored learning sessions in this course. The session plan and related material for the same will be shared in this course a few days before the session. It is a great practice to prepare a list of questions that you want to ask in the session.

Week	**Case Study**
1	HR employee attrition analysis
2	Bike Sharing Analysis
3	Supermarket Campaign
4	Project Debrief

6. Towards the end of the week's content, you will be provided with the **lecture slides** that were used in the videos by the faculty.

7. Towards the end of the week's content, you will find **Additional case studies** that are detailed problem-solving exercises. It is strongly advised that you attempt the case study yourself first and then refer to the solution shared to assess and compare the analysis and findings.

Week	**Additional Case Study**
1	Diabetes Risk Prediction
2	Wine Quality Analysis
3	German Credit

8. There are 3 **graded quizzes**, one due each week and there is **1 graded hands-on project**, due at the end of the third week.

9. You can refer to the **FAQ page** to quickly find answers to the common questions asked by the learners regarding the week's content. You will also find **reference material** that will include articles, curated learning material, and other references that will allow you to further explore the topics.

10. You will use various **Python libraries** such as XGBoost in this course. Please refer to the **FAQ-Boosting** page to install the required XGBoost library in your system.

Guidelines:

1. While watching the **hands-on video lectures**, it is highly recommended that you work simultaneously with the faculty by downloading the shared dataset and hands-on notebook(s).

2. You can refer to the **FAQ pages** to quickly find answers to the common questions asked by the learners regarding the week's content and the project.

3. It is recommended to go through the **reference materials** if you are interested in further exploration of the topics covered in the week.