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## ☰ Course Content

# Session Plan - Bagging and Random Forest

## Learning Objectives:

- Understand the basic concepts of Ensemble Methods - Bagging and Random Forest.
- Learn how to perform Bagging and Random Forest in Python
- Gain perspective on the applicability of Ensemble Methods and how it can be used to solve a variety of problems.

## Structure of the Session

Dur atio n	Topic	Details
5 Min	Session structure	<ul style="list-style-type: none"><li>• Discuss the learning objectives of the session.</li></ul>
25 min	Discussio n of videos of the week	<ul style="list-style-type: none"><li>• Use the Discussion Questions to gauge the level of understanding of the learners on videos covered during the week and identify areas to focus on.</li><li>• Make the group understand the concept of Ensemble Methods, Different Metrics (Precision, Recall, Accuracy), where the group needs help.</li></ul>
10 min	EDA	<ul style="list-style-type: none"><li>• Discussion of data cleaning, key observations, and insights from the EDA section.</li></ul>
50 min	Hands-on Case study	<ul style="list-style-type: none"><li>• Perform the Ensemble Techniques on the HR Attrition data.</li></ul>
15 min	Industry Perspecti ve	<ul style="list-style-type: none"><li>• Discuss practical applications, exchange thoughts, and challenges around Bagging and Random forest.</li><li>• Share experience (examples) of some real-life use cases of how Bagging and Random forest helped you in a project and also explain the challenges and considerations involved.</li></ul>
10 min	Extended QnA	<ul style="list-style-type: none"><li>• Discuss the doubts regarding the implementation, concepts, or any other relevant question where the group needs help.</li></ul>
5 min	Summariz e the session	<ul style="list-style-type: none"><li>• In simple bullet points, cover the contents covered during the session</li></ul>

**Important points to note:**

- In the hands-on section, kindly **do not** spend more than **10-15 minutes on EDA**. It is important that the focus stays on the implementation of Ensemble Models and not too much on the EDA section as it covers the concepts which are similar to the concepts discussed multiple times previously. We have noticed that if the plan is not followed the session exceeds the time limit.
- Kindly **do not** run the code cells containing the Hyperparameter Tuning using GridSearchCV during the session, since it takes considerable time to run.
- Be well prepared for the session, ensure to watch all the videos, related codes, and datasets. (It renders the Mentored Learning session of no use if we are not completely prepared)
- Log in for your session 5 min before and make sure you are ready with all the material to be used for the session.

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