Great Learning

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☰ Course Content

Overview - ML Pipeline and Hyperparameter Tuning

Week 1: FEATURE ENGINEERING AND CROSS VALIDATION

Understand the feature engineering and cross validation. Learn about methods to handle imbalance data and regularization methods.

IMPROVING MODEL PERFORMANCE BY TUNING

Week 2: ML PIPELINE AND HYPERPARAMETER TUNING

Understanding the pipeline concepts. Learn about model tuning and two types of hyperparameter tuning Gridsearch and Random Search.

QUICK RECAP

In the previous week, we learned about how to handle imbalanced data and how to check the model performance using the cross-validation technique. Let us quickly recap what we have covered so far.

- Introduction to Feature Engineering
- Introduction to k-fold cross-validation
- Oversampling and undersampling
- Regularization Models

COURSE OVERVIEW

Week	Module	Name of the topic
1	Feature Engineering and Cross-Validation	Feature Engineering Cross-validation Oversampling and Undersampling Regularization Error function in terms of contour graph
2	ML Pipeline and Hyperparameter Tuning	Machine Learning Pipelines Model Tuning and Performance Hyperparameter Tuning Grid Search Random Search

WEEK 2 OVERVIEW

This week you will learn how to maximize the model performance using hyperparameter tuning. We would cover how to automate standard workflows in your machine learning process using a python pipeline. The following topics will be covered in this module:

- Pipelines concepts
- Build a pipeline and make a pipeline
- Model Tuning and Performance
- Hyperparameter Tuning with Grid search and Random search

LEARNING INSTRUMENTS

Week	Module	No. of videos	Total duration	No. of Test Your Understanding Quizzes	No. of Weekly Graded Quizzes	No. of Practice Assignments
2	ML pipeline and hyperparameter Tuning	8	~1.5 hr	8	1	1

Note: You will be required to spend approximately 1 hour/day along with practicing datasets and quizzes.

Power Ahead!

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