Class Materials for Class 4-Module 1

Tags	Module-1
Class	4
Course Name	MLOps with Cloud
Created Date	@October 1, 2024
Module Name	Introduction of MLOps
Related Topics	automation, concept-drift, mlops maturity levels, mlops with cloud, mlops-fundamentals, model-drift, monitoring
Resource Type	reading-materials

Reading Materials:

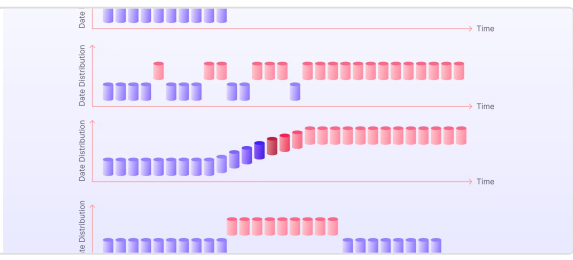
Articles:

1.

Model Drift: Best Practices to Improve ML Model Performance

Machine learning (ML) models can learn, adapt, and improve. But, they are not immune to “wear and tear” like traditional software systems. A rec

https://encord.com/blog/model-drift-best-practices/



2.

Everything you need to know about drift in machine learning | Superwise ML Observability

Drift in machine learning comes in many forms and variations most commonly known as concept drift, data drift, and model drift. But drift is nuanced, and different types of drift require different solutions.

https://superwise.ai/blog/everything-you-need-to-know-about-drift-in-machine-learning/

Books:

💡 Suggested Reading:

1. **"Designing Machine Learning Systems" by Chip Huyen:**
    a. **Types of Data Distribution Shifts:** It distinguishes between three main types: **covariate shift**, **label shift**, and **concept drift**, explaining each type with examples. Understanding these distinctions is crucial for recognizing and addressing different ways data can change over time.
    b. **Detecting Data Distribution Shifts:** The chapter discusses methods for detecting data distribution shifts, focusing on monitoring the input distribution and comparing it to the training data. This includes techniques like statistical distance measures and domain classifiers.
    c. **Addressing Data Distribution Shifts:** The chapter also explores strategies for handling data distribution shifts, such as retraining models, adapting existing models, and using more robust training datasets.
2. **Machine Learning Design Patterns" by Valliappa Lakshmanan, Sara Robinson etc. :**
    a. **Chapter 1 (Introduction)**