AI MLOPS / LLMOPS / Model Failure & Drift Risk

29 August – 2 September 2027
Online



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Introduction

The rapid adoption of artificial intelligence across organizations has made model management a critical operational function. AI MLOps / LLMOps / model failure & drift risk plays a central role in ensuring that models continue to perform reliably and support data-driven decision-making.

Organizations increasingly face challenges such as model degradation over time, data inconsistencies, and limited visibility into model behavior after deployment. Without structured practices, these issues can lead to inaccurate predictions and operational inefficiencies.

This course provides a practical framework for managing the full lifecycle of AI models. It emphasizes creating strong MLOPS and LLMOPS practices, spotting risks of model failure, and tackling model drift with organized and measurable methods. Participants will work with real-world scenarios and tools that can be applied directly within operational environments.

Course Objectives

By the end of this course, participants will be able to:

- Understand the core concepts of AI MLOps and LLMOps.
- Identify and analyze model failure risks.
- Monitor model performance after deployment.
- Recognize different types of model and data drift.
- Apply techniques to mitigate model drift risks.
- Build and manage model lifecycle pipelines.
- Improve model performance using continuous evaluation.
- Implement automation tools for model operations.
- Align model performance with business objectives.
- Analyze real-world cases of model failure.



Course Outlines

Day 1: Foundations of MLOPS and LLMOPS

- Introduction to MLOPS and LLMOPS concepts.
- Differences between model development and operations.
- Components of model deployment environments.
- Data management across lifecycle stages.
- Operational challenges in AI systems.
- Practical exercise on setting up model environments.

Day 2: Model Lifecycle and Pipeline Management

- End-to-end model lifecycle stages.
- Model versioning and tracking.
- Building automated pipelines for models.
- Integration with production systems.
- Managing updates and improvements.
- Hands-on pipeline development exercise.

Day 3: Model Failure Analysis

- Definition and types of model failure.
- Common sources of model errors.
- Evaluating model performance using key metrics.
- Impact of data quality on outcomes.
- Case studies of real model failures.
- Practical exercises on diagnosing issues.

Day 4: Model Drift and Risk Management

- Understanding model drift and its types.
- Differences between data drift and concept drift.
- Techniques for detecting drift in production.
- Continuous monitoring tools and practices.
- Strategies for mitigating drift risks.
- Practical application on monitoring live models.



Day 5: Governance and Continuous Improvement

- Establishing model governance frameworks.
- Managing AI-related operational risks.
- Continuous performance evaluation methods.
- Building model performance reports.
- Final project evaluation and review.
- Integrated practical application across all topics.

Why Attend This Course: Wins & Losses!

- Gain a structured understanding of model lifecycle management.
- Improve model accuracy and reliability.
- Reduce risks associated with model failure in production.
- Detect and address model drift early.
- Enhance data-driven decision-making.
- Develop practical skills in model monitoring.
- Apply modern tools in MLOPS and LLMOPS.
- Strengthen operational stability of AI systems.

Conclusion

Managing AI models effectively is essential for organizations that rely on advanced analytics and automated decision-making. AI MLOPS / LLMOPS / Model failure & drift risk provides a structured approach to ensuring models remain accurate, reliable, and aligned with operational goals.

This course delivers a practical understanding of model lifecycle management, combining development, deployment, monitoring, and continuous improvement into a unified process. It highlights the importance of identifying performance issues early and applying corrective actions before they impact business outcomes.

By applying the concepts covered, organizations can improve model quality, reduce operational risks, and maintain consistent performance over time. The structured approach to monitoring and governance supports better control over AI systems and enhances overall efficiency.

The course integrates both theoretical understanding and practical application, focusing on real operational challenges and actionable solutions. This makes it a valuable resource for improving model performance and strengthening organizational readiness for evolving AI demands.

