



INDEED INSPIRING INFOTECH



Learning & Development Company

www.indeedinspiring.com | info@indeedinspiring.com

[9762203269](tel:9762203269) / [9850113269](tel:9850113269)



Machine Learning Operations Syllabus



INTRODUCTION TO MLOPS

- Overview of MLOps and its significance in machine learning projects
- Understanding the challenges in deploying and managing ML models in production
- Introduction to key tools and technologies in MLOps

VERSION CONTROL AND COLLABORATION FOR ML

- **Git and GitHub/GitLab for version control in ML projects**
- **Branching strategies and workflows specific to ML projects**
- **Collaborative development using Git for ML teams**

DATA VERSIONING AND MANAGEMENT

- Versioning datasets and data pipelines
- Data lineage and provenance tracking
- Data governance and compliance considerations

MODEL TRAINING AND EXPERIMENTATION

- Managing ML experiments and tracking model versions
- Reproducible model training with containerization
- Hyperparameter tuning and experiment management

MODEL DEPLOYMENT AND SERVING

- Model deployment strategies and considerations
- Containerization of ML models using Docker
- Model serving using REST APIs and microservices architecture

CONTINUOUS INTEGRATION AND CONTINUOUS DEPLOYMENT (CI/CD) FOR ML

- **Setting up CI/CD pipelines for ML projects**
- **Automated testing and quality assurance for ML models**
- **Deployment strategies and best practices for ML models**

MONITORING AND PERFORMANCE EVALUATION

- Monitoring model performance and drift in production
- Setting up performance metrics and thresholds
- Model retraining and continuous learning

MODEL GOVERNANCE AND COMPLIANCE

- Managing model lifecycle from development to retirement
- Model explainability and interpretability
- Compliance considerations (e.g., GDPR, HIPAA) for ML models

SCALABILITY AND RESOURCE MANAGEMENT

- **Scaling ML workloads with cloud infrastructure**
- **Managing compute resources for ML training and serving**
- **Cost optimization strategies for ML deployments**

SECURITY AND PRIVACY IN MLOPS

- Securing ML models and data
- Implementing access controls and encryption
- Privacy considerations in ML deployments

CASE STUDIES AND REAL-WORLD PROJECTS

- Analyzing and discussing real-world MLOps case studies
- Hands-on projects to apply learned concepts

BEST PRACTICES AND EMERGING TRENDS IN MLOPS

- Industry best practices in MLOps
- Exploring emerging trends and technologies in MLOps



THANK YOU!

**WE LOOK FORWARD TO THE OPPORTUNITY TO DISCUSS
THIS PROPOSAL IN FURTHER DETAIL AND ADDRESS ANY
QUESTIONS OR CONCERNS YOU MAY HAVE.**



REACH US AT

info@indeedinspiring.com / www.indeedinspiring.com

[+91 9762203269](tel:+919762203269) / [+91 9850113269](tel:+919850113269)

