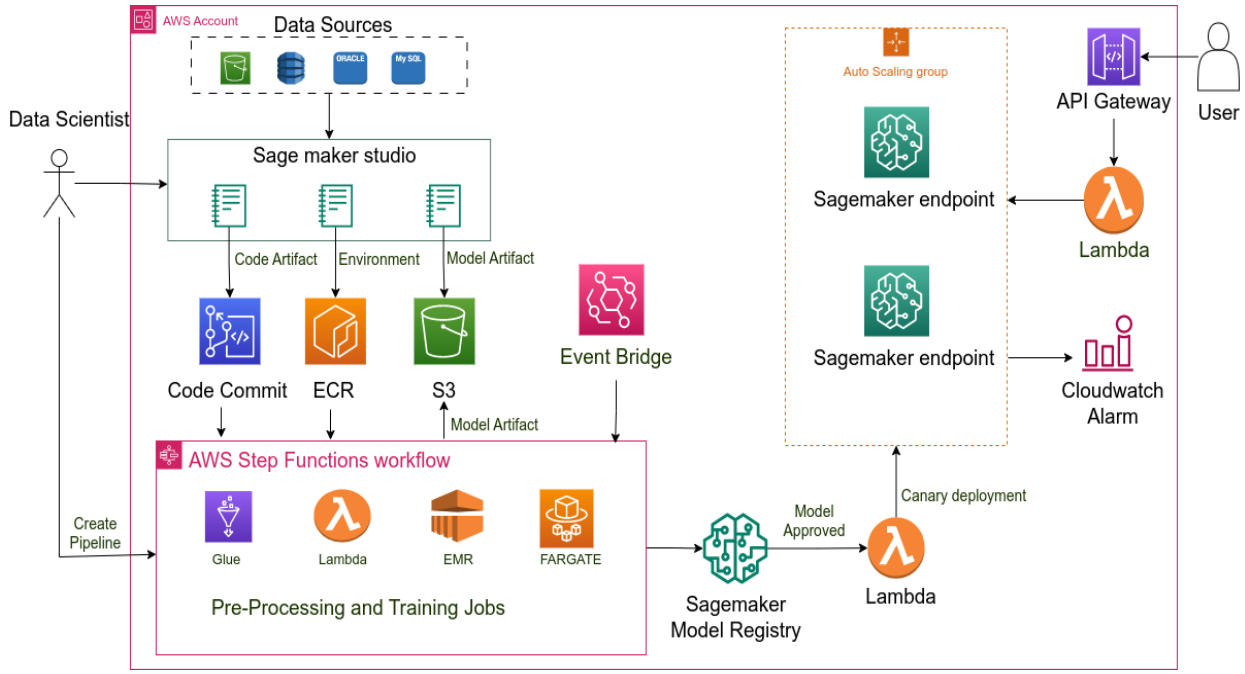
LEARN, THINK, INNOVATE

MLOps



OVERVIEW

The **MLOps Training at eMexo Technologies** in **Electronic City**, **Bangalore** is designed for aspiring **data scientists**, **ML engineers**, and **AI professionals** who want to master the skills required to **build**, **deploy**, **automate**, and **manage scalable** and **secure machine learning solutions** in **real-world production environments**. This program covers all essential domains of **MLOps**, including **data pipeline automation**, **model development** and **deployment**, **model monitoring**, **model governance**, **version control**, **security practices**, and **cost-optimized ML strategies**. With a strong focus on **real-world industry scenarios**, you'll gain practical knowledge of widely used **MLOps tools** such as **MLflow**, **Kubeflow**, **Docker**, **Kubernetes**, **Git**, **Jenkins**, **Airflow**, **TensorFlow Extended (TFX)**, and major **cloud platforms** like **AWS SageMaker**, **Azure ML**, and **Google AI Platform**. These skills prepare you not just for **hands-on projects**, but also for managing **enterprise-level AI operations** effectively.

As a leading **MLOps Training Institute** in **Electronic City**, **eMexo Technologies** ensures a **hands-on**, **practical learning approach** with **real-time industry projects** that replicate actual **corporate challenges**. You'll learn how to design and maintain robust **ML workflows**, implement **CI/CD automation pipelines** for ML, manage **datasets** and **model governance** securely, monitor **model drift** and **data quality issues**, and optimize **infrastructure** for **performance** and **cost**. The course also emphasizes **best practices** for the **end-to-end ML** lifecycle, including model experimentation, hyperparameter tuning, deployment on cloud and on-premises, continuous training (CT), and scaling ML models to handle high-traffic **environments**. This comprehensive approach gives you the confidence to step into demanding **MLOps Engineer**, **Machine Learning Engineer**, or **AI Infrastructure Specialist** roles right after completing the training.

With **expert trainers**, a **structured learning path**, **dedicated mentorship**, and **100% placement assistance**, this program not only builds your **technical expertise** but also ensures **career advancement** in one of the **fastest-growing fields** in **technology**. By the end of the course, you'll be fully equipped to implement **MLOps frameworks** in **production environments**, collaborate effectively with **data scientists** and **DevOps teams**, and deliver scalable AI/ML solutions for real business problems. This makes it one of the best-rated MLOps Courses in Electronic City, **highly recommended MLOps Training** in **Electronic City**, and the **most trusted MLOps Training Institute** in **Electronic City**, designed to launch and accelerate your career in **Artificial Intelligence**, **Machine Learning**, and **MLOps operations**.

TRAINING FEATURES

Real-life Case Studies

Do a real-life case study to understand the usage in real-world scenarios.

Assignments

Each class will be followed by a practical assignment switch that can be completed before the next class.

Preparation for interview

Our trainers are professionals working in multinational corporations. They are experts in their field and know exactly what the interviewer will look for in the candidate. Experienced trainers not only share interview questions but also conduct mock interviews to help prepare for the actual interview.

Key Features

eMexo Technologies offers the Best **MLOps Training in Electronic City Bangalore** with the **TOP industry expert trainers**.

Here are the key features.

- ★ Free Demo Class Available
- ★ Practical Approach
- ★ Expert & Certified Trainers
- ★ 100% Job Oriented Training
- ★ Real World use cases and Scenarios
- ★ Completed 500+ Batches
- ★ Certification Guidance

MLOps Course Content

Module 1: Introduction to MLOps

- What is MLOps?
- Importance of MLOps in modern AI/ML lifecycle
- Traditional ML workflow vs MLOps workflow
- MLOps principles: CI/CD, automation, reproducibility, scalability
- Case studies of MLOps in industry

Module 2: ML Lifecycle & Version Control

- ML development lifecycle: data → model → deployment → monitoring
- Data versioning with DVC / Git LFS
- Model versioning with MLflow / Weights & Biases
- Experient tracking & collaboration
- **Hands-on:** Track datasets & mML experiments with MLflow; store and retrieve multiple model versions

Module 3: CI/CD for Machine Learning

- Overview of CI/CD in MLOps
- Automating ML pipelines using Jenkins / GitHub Actions / GitLab CI
- Integrating code linting, testing & packaging
- Automating training workflows
- **Hands-on:** Set up a CI/CD pipeline to train & test an ML model automatically

Module 4: Containerization & Orchestration

- Introduction to Docker for ML applications
- Building Docker images for ML models
- Introduction to Kubernetes (K8s)
- Deploying ML workloads on Kubernetes
- Scaling and monitoring ML services in production
- **Hands-on:** Containerize an ML model using Docker; deploy on Kubernetes cluster

Module 5: Model Deployment Strategies

- Deployment options: batch, real-time, streaming
- Serving ML models with Flask / FastAPI
- Model serving with TensorFlow Serving / TorchServe

- REST API & gRPC endpoints for ML models
- Canary deployments, blue-green deployment strategies
- **Hands-on:** Deploy ML model as REST API on Azure Web App / AWS Sagemaker / GCP AI Platform

Module 6: ML Pipelines & Workflow Automation

- Introduction to pipelines (Kubeflow, TFX, Airflow, Prefect)
- Data preprocessing pipelines
- Model training & evaluation pipelines
- Automated retraining pipelines
- **Hands-on:** Create an end-to-end ML pipeline using Kubeflow or Airflow

Module 7: Monitoring & Logging in Production

- Importance of monitoring ML systems
- Concept drift, data drift & model performance monitoring
- Logging with ELK stack / Prometheus & Grafana
- Alerting & automated retraining triggers
- **Hands-on:** Implement monitoring dashboard for deployed ML model

Module 8: Cloud & MLOps Tools

- AWS Sagemaker, Azure ML, GCP Vertex AI overview
- MLOps with cloud-native tools
- Cost optimization strategies for ML workflows

Module 9: Security, Compliance & Governance

- Data security in ML pipelines
- Model explainability & fairness
- Governance, audit trails & compliance (GDPR, HIPAA, etc.)

Module 10: Capstone Project

- **End-to-End MLOps Pipeline covering**

- Data collection & preprocessing
- Model training & versioning
- CI/CD pipeline for ML model
- Containerization & deployment on cloud/K8s

- Monitoring & retraining setup

Tools Covered

- **Versioning & Tracking:** Git, DVC, MLflow, Weights & Biases
- **CI/CD:** Jenkins, GitHub Actions, GitLab CI
- **Containers & Orchestration:** Docker, Kubernetes, Helm
- **Model Serving:** Flask, FastAPI, TensorFlow Serving, TorchServe
- **Pipelines:** Airflow, Kubeflow, TFX, Prefect
- **Cloud Platforms:** AWS Sagemaker, Azure ML, GCP Vertex AI
- **Monitoring:** Prometheus, Grafana, ELK Stack