# MLOps Iris Classification – End to End Pipeline

**Group No: 70**

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* **GitHub Repository**: Complete project hosted on GitHub with clean structure

<https://github.com/SaritGhoshBits25/MLOps_Assignment_Group70>

* **Docker Hub Repository**:

<https://hub.docker.com/r/wp1412011989/iris-api>

* **Demo Video Link:**

<https://drive.google.com/drive/folders/15KfNF9Iwzfgb3ljQOudrMe5CuQ60zw4y?usp=drive_link>

## Architecture Implementation Summary

The MLOps architecture for the Iris Classification system implements a comprehensive machine learning operations pipeline that ensures scalability, reliability, and maintainability. The system follows modern DevOps practices with automated CI/CD, monitoring, and containerization.

• ✅ Complete MLOps pipeline with data versioning, model tracking, and automated deployment

• ✅ Microservices architecture with Docker containerization and orchestration

• ✅ Comprehensive monitoring with Prometheus metrics and health checks

• ✅ Automated CI/CD pipeline with GitHub Actions for testing and deployment

• ✅ Production-ready API with FastAPI, input validation, and error handling

• ✅ Multi-algorithm ML implementation with MLflow experiment tracking

• ✅ Data version control with DVC for reproducible data processing

• ✅ Database logging and audit trail for prediction tracking

### Architecture Diagram:A screenshot of a computer screen AI-generated content may be incorrect.