

**Xerxez Solutions**  
**Cooperate Training**  
**On**  
**Machine Learning with No Code/Low Code**  
**(Obviously AI)**



This document provides the curriculum outline of the Knowledge, Skills, and Abilities that a **Software Development Engineer, Machine Learning Consultant, Machine Learning Architect** can be expected to demonstrate on Microservice Platform.

**Prerequisite:**

- No Programming Experience needed.
- You can learn what you need to know about Machine Learning.
- You will enjoy it better if you know the basics of machine learning
- Basic understanding of data analysis and statistics.

**Out Come:**

This democratization of machine learning (ML) has become increasingly important. Traditional ML approaches often require significant programming and mathematical expertise, limiting accessibility to a broader audience. This course aims to bridge this gap by providing a comprehensive introduction to machine learning concepts and techniques without the need for extensive coding.

Throughout this course, participants will explore the fundamentals of machine learning using no-code or low-code platforms, enabling them to build, deploy, and manage machine learning models with ease.

**Why Learning Machine Learning – No Code is Important:**

- **Introduction to Machine Learning:** Participants will gain a solid understanding of foundational machine learning concepts, including supervised learning, unsupervised learning, and reinforcement learning. They will explore common ML tasks such as classification, regression, clustering, and anomaly detection.
- **No-Code Machine Learning Platform:** Participants will learn about leading no-code machine learning platforms and tools, such as Google Cloud AutoML, Microsoft Azure ML, H2O.ai, DataRobot, Obviously AI. They will discover how these platforms enable users to create and deploy ML models without writing extensive code, leveraging intuitive interfaces and pre-built algorithms.
- **Model Building and Evaluation:** Participants will learn how to build, train, and evaluate machine learning models using no-code platforms. They will explore various algorithms

and techniques for model selection, hyperparameter tuning, and performance evaluation, ensuring the development of robust and accurate models.

- **Development and Monitoring:** The course will cover best practices for deploying machine learning models into production environments using no-code platforms. Participants will learn how to monitor model performance, track key metrics, and implement model updates and retraining as needed.

Local setup (Physical Mode)	General Requirement	Cloud Account
Laptop/Desktop with high-speed internet connection, Windows 10 and above	64-bit kernel and CPU support for virtualization.	Amazon Web Service (AWS) - Optional
Memory: 4 GB RAM	Graphics Card	
CPU: 1 CPU Cores	Visual Studio	
Storage: 20 GB	Git/GitHub Account	

## Topics Covered:

### 1. Introduction to Machine Learning with No - Code

- Overview of Machine Learning and its Importance, No Code ML Platform
- Understanding Machine Learning Concepts
- Types of Machine Learning Algorithms
- Introduction to MLOps
- Introduction to No-Code Machine Learning Tools

### Hands-on: 50% Theory and 50% Practical

### 2. Data Collection, Acquisition, EDA, Data Cleaning and Preparation

- Introduction to Data Sources and Datasets.
- Techniques for Data Collection without Coding
- Data Import and Preprocessing using No-Code Tools.
- Data Visualization, Summary Statistics, Data Exploration
- Identifying Patterns and Trends in Data, Data Cleaning, Missing Values and Outlier
- Feature Engineering, Dimensionality Reduction, Handling Categorical Data.
- Encoding - Structure and Unstructured data, Balancing Imbalance Data.

### Hands-on:

### 3. Supervised Learning Algorithms

- Linear Regression and Polynomial Regression
- Logistic Regression and Classification Algorithms (e.g. Decision Trees, Random Forest, K-Nearest Neighbors)

- Building Classification and Regression Models without Coding
- Model Evaluation, Interpretation and Validation Techniques

**Hands - on:**

#### **4. Unsupervised Learning Algorithms**

- Clustering Techniques (e.g., K-Means, Hierarchical Clustering) without Coding
- Dimensionality Reduction Techniques (e.g., PCA, t-SNE) using No-Code Tools
- Anomaly Detection and Outlier Analysis

**Hands-on:**

#### **5. Advance Machine Learning Topics**

- Ensemble Learning Methods (e.g., Bagging, Boosting)
- Deploying Support Vector Machines (SVM)
- Neural Networks and Deep Learning

**Hands-on:**

#### **6. Text Analytics and Natural Language Processing (NLP)**

- Introduction to Text Analytics and NLP
- Text Processing, Text Representation and Sentiment Analysis without Coding
- Building NLP Models using No-Code Platforms
- Vector Embeddings, Techniques to change Words to Vectors

**Hands-on:**

#### **7. Text Analytics and Natural Language Processing (NLP)**

- Introduction to Text Analytics and NLP.
- Text Processing, Text Representation and Sentiment Analysis without Coding.
- Building NLP Models using No-Code Platforms
- Vector Embeddings, Techniques to change Words to Vectors.

**Hands-on:**

#### **8. Model Evaluation and Optimization**

- Understanding Model Evaluation Metrics (Accuracy, Precision, Recall, F1 Score, ROC-AUC)
- Cross-Validation Techniques (K-fold, Stratified, et)
- Model Selection Strategies (Hyperparameter Tuning and Grid Search, Randomized Search, etc.)
- Model Performance Visualization Techniques
- Bias-Variance Tradeoff and Overfitting/Underfitting

**Hands-on:**

## **9. Feature Selection, Model Interpretability, Deployment and Integration**

- Feature Selection Techniques without Programming.
- Model Interpretability and Explainability.
- Interpreting Model Outputs and Insights.
- Deploying Models without Coding
- Integration with Web and Mobile Applications using No-Code Platforms
- Model Explanation
- Model Monitoring and Management

**Hands-on:**

## **10. Feature Selection, Model Interpretability, Deployment and Integration**

- Feature Selection Techniques without Programming.
- Model Interpretability and Explainability.
- Interpreting Model Outputs and Insights.
- Deploying Models without Coding
- Integration with Web and Mobile Applications using No-Code Platforms
- Model Explanation
- Model Monitoring and Management

**Hands-on: Real Time Application in Various Industries**

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