



STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME  
**SIWES**



**ROLASOFT PROFESSIONAL COMPUTER & IT  
COURSES VERSION 2.0 LATEST**

**SIWES Diploma in Machine  
Learning (ML)**

*Become a job-ready Machine Learning in 3-6  
months!*

# Benefits of Studying with RolaSoft

## ✓ 1. Industry-Relevant Curriculum

Stay ahead with a syllabus designed by industry experts, focused on real-world applications of Machine Learning (ML).

## ✓ 2. Hands-On Training

Learn by doing — build real-time projects, full-scale Machine Learning (ML).

## ✓ 3. Experienced Instructors

Gain insights from certified professionals and senior certified ethical hacker with years of teaching and industry experience.

## ✓ 4. Placement Assistance

Access job support services including resume building, mock interviews, and direct placement opportunities with partner companies.

## ✓ 5. Flexible Learning Modes

Choose between: **Online**, **Offline (at our center)**, or **Hybrid Classes**

# Benefits of Studying with RolaSoft

## ✓ 6. Mini & Major Projects

Work on individual and group projects to strengthen your portfolio and impress future employers.

## ✓ 7. Certification Upon Completion

Earn a **Diploma Certificate** from **RolaSoft Technologies**, recognized by IT recruiters and employers.

## ✓ 8. Small Batch Size

Personalized attention and better interaction in small groups for an enhanced learning experience.

## ✓ 9. Affordable Fees & Installment Plans

Top-tier training at a reasonable cost, with flexible payment options.

## ✓ 10. Career-Oriented Skills You'll Gain at RolaSoft Technologies

RolaSoft ensures you're job-ready with the right tech stack and practical knowledge.

# SIWES Overview

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**SIWES** (Student Industrial Work Experience Scheme) is a structured industrial training program designed for students in Nigerian tertiary institutions studying science, engineering, technology, and other professional courses. It is coordinated by the **Industrial Training Fund (ITF)** and serves as a bridge between academic knowledge and practical industry experience.

Typically conducted for a duration of **3–6 months**, SIWES places students in real work environments related to their field of study. During this period, they apply classroom theory to practical tasks and gain firsthand understanding of workplace expectations and professional practices.

# Advantages of SIWES to Students

## Advantages of SIWES to Students

**Hands-On Experience:** Provides real-world exposure and practical knowledge in the student's field.

**Bridging the Skills Gap:** Helps students connect academic theories with industry practices.

**Career Readiness:** Prepares students for post-graduate employment by developing technical and soft skills.

**Professional Networking:** Offers opportunities to build relationships with industry professionals.

**Improved Employability:** Enhances resumes/CVs with relevant work experience that employers value.

**Understanding of Workplace Culture:** Teaches students workplace ethics, teamwork, and communication.

**Opportunity for Future Placement:** Sometimes leads to job offers or future internships with the same organization.

# SIWES Machine Learning (ML) Course Details



## **Duration**

Three-Six (3-6) Months



## **Schedule**

Weekdays / Weekends



## **Learning Modes**

Online, Offline (at our center), or Hybrid Classes



## **Start Date**

New batches start every month — enroll now!



## **Eligibility**

No prior experience required

# SIWES Machine Learning (ML) – Program Details

## Program Overview

The **Machine Learning (ML)** course introduces students to the foundations and applications of machine learning. Students will learn to build and deploy machine learning models using Python, understand the various types of ML (supervised, unsupervised, reinforcement learning), and gain hands-on experience with popular machine learning libraries like **scikit-learn**, **TensorFlow**, and **Keras**.

# SIWES Machine Learning (ML) - Target Audience & Prerequisites

## Target Audience:

- ✓ Students pursuing careers in **Data Science**, **AI**, and **Machine Learning** or anyone with an interest in building intelligent systems using data, especially for SIWES or internships students.

## Prerequisites:

- ✓ Basic knowledge of programming (preferably in Python), mathematics (linear algebra, statistics, calculus), and algorithms.

# SIWES Machine Learning (ML) Course Curriculum

## Module 1: Introduction to Machine Learning

- ✓ What is Machine Learning?
- ✓ Types of ML: Supervised, Unsupervised, Reinforcement Learning
- ✓ Overview of ML algorithms and applications
- ✓ Data preprocessing and cleaning

# SIWES Machine Learning (ML) Course Curriculum

## Module 2: Python for Machine Learning

- ✓ Introduction to Python libraries: NumPy, pandas, Matplotlib, Seaborn
- ✓ Data handling and manipulation in Python
- ✓ Exploratory Data Analysis (EDA)
- ✓ Data visualization techniques

# SIWES Machine Learning (ML) Course Curriculum

## Module 3: Supervised Learning

- ✓ Supervised vs unsupervised learning
- ✓ Regression algorithms: Linear Regression, Polynomial Regression
- ✓ Classification algorithms: Logistic Regression, K-Nearest Neighbors (KNN), Support Vector Machines (SVM)
- ✓ Model evaluation techniques: Cross-validation, Precision, Recall, F1-score

# SIWES Machine Learning (ML) Course Curriculum

## Module 4: Unsupervised Learning

- ✓ Clustering techniques: K-Means, DBSCAN, Hierarchical Clustering
- ✓ Dimensionality reduction: PCA (Principal Component Analysis), t-SNE
- ✓ Association rule learning: Apriori, Eclat
- ✓ Anomaly detection

# SIWES Machine Learning (ML) Course Curriculum

## Module 5: Ensemble Learning

- ✓ Introduction to ensemble methods
- ✓ Bagging vs boosting
- ✓ Decision Trees and Random Forests
- ✓ AdaBoost, Gradient Boosting, XGBoost
- ✓ Model tuning and optimization (Hyperparameter tuning, GridSearchCV)

# SIWES Machine Learning (ML) Course Curriculum

## Module 6: Neural Networks and Deep Learning

- ✓ Introduction to neural networks
- ✓ Building a simple neural network using Keras/TensorFlow
- ✓ Activation functions (ReLU, Sigmoid, Tanh)
- ✓ Overfitting and underfitting, regularization techniques (Dropout, L2 regularization)

# SIWES Machine Learning (ML) Course Curriculum

## Module 7: Advanced Machine Learning Techniques

- ✓ Support Vector Machines (SVM) and Kernel methods
- ✓ Recurrent Neural Networks (RNN) and Long Short-Term Memory (LSTM)
- ✓ Convolutional Neural Networks (CNN) for image classification
- ✓ Reinforcement Learning (Q-learning, Policy Gradients)

# SIWES Machine Learning (ML) Course Curriculum

## Module 8: Model Evaluation and Optimization

- ✓ Bias-variance tradeoff
- ✓ Model evaluation metrics for regression and classification
- ✓ Overfitting and underfitting: Techniques to prevent them
- ✓ Model selection and comparison
- ✓ Hyperparameter tuning (RandomizedSearchCV, GridSearchCV)

# SIWES Final Capstone Project (End of 3-6 Months)

Students will complete an **industry-level project**:

- ✓ Building an end-to-end ML project (e.g., image classification, recommendation system, prediction model)

# SIWES Machine Learning (ML) - Certification Obtain

After completion of the program, the student will be awarded with a certificate:

**SIWES Diploma in Machine Learning (ML)**

# SIWES Machine Learning (ML) - Roles After Completion

Graduates of this course can pursue the following roles:

- ✓ **Machine Learning Engineer:** Designs and develops machine learning models, focusing on optimization and automation.
- ✓ **Data Scientist:** Analyzes and interprets complex data sets, builds predictive models, and extracts insights.
- ✓ **Data Analyst (ML-focused):** Uses machine learning techniques to analyze data, create visualizations, and provide insights.
- ✓ **AI Engineer:** Builds AI models and systems using machine learning and deep learning techniques.
- ✓ **Deep Learning Engineer:** Specializes in neural networks, building advanced models for applications like image recognition, NLP, etc.
- ✓ **ML Researcher:** Works on cutting-edge research to advance the field of machine learning and develop new algorithms.
- ✓ **Business Intelligence (BI) Analyst:** Leverages machine learning to transform business data into actionable insights and predictions.

# SIWES Machine Learning (ML) - Roles After Completion

- ✓ **ML Operations Engineer:** Manages the deployment, monitoring, and scaling of machine learning models in production environments.
- ✓ **NLP Engineer:** Focuses on machine learning applications involving natural language processing (e.g., text classification, sentiment analysis).
- ✓ **Computer Vision Engineer:** Works on machine learning and deep learning applications for image and video analysis.

# Rolasoft Technologies Services

## Rolasoft Technologies – Services Offered

### ✓ **SOFTWARE DEVELOPMENT COMPANY**

(MOBILE APPLICATION, WEB APPLICATION, DESKTOP APPLICATION, CUSTOMIZED APPLICATION, E-COMMERCE WEBSITE)

### ✓ **PROFESSIONAL COMPUTER AND IT EDUCATION**

(TOP-UP PROGRAMS, DIPLOMA PROGRAMS, CERTIFICATE PROGRAMS, TECH @ SCHOOL, CORPORATE PROGRAMS, SIWES PROGRAMS, CUSTOMIZED PROGRAMS)

### ✓ **DIGITAL ADVERTISING AND BUSINESS BRANDING**

(SOCIAL MEDIA MARKETING, EMAIL MARKETING, CONTENT MARKETING, WEBSITE SEO, BRANDED CLOTHING, STICKERS AND TAG, CUSTOM BRANDING, AND MANY MORE)

### ✓ **INTERNATIONAL UNIVERSITY ADMISSION PROCESSING**

(AMERICA, UK, CANADA, EUROPE, AFRICA, AND MANY MORE)

## Contact & Registration

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 **Enroll Today & Start Your SIWES Machine Learning (ML)  
Journey!**

*Shape your future with SIWES Machine Learning (ML)*