

## Why Learn Data Science & Machine Learning (AI) ?

Data science is used to forecast future trends. Artificial intelligence anticipates user preferences and behavior. Machine learning enables algorithms to make informed guesses based on patterns they've discerned

## Audience Profile :

- Developers aspiring to be an 'Artificial Intelligence Engineer' or Machine Learning engineers
- Analytics managers who are leading a team of analysts
- Information architects who want to gain expertise in Artificial Intelligence algorithms
- Graduates looking to build a career in Artificial Intelligence and Machine Learning

## Prerequisites:

- **Python Programming Experience**



## Course Overview:

- With the demand for Artificial Intelligence in a broad range of industries such as banking and finance, manufacturing, transport and logistics, healthcare, home maintenance, and customer service, the Artificial Intelligence course is well suited for a variety of profiles like:
- Developers aspire to be an 'Artificial Intelligence Engineer' or Machine Learning engineers.
- Analytics managers who are leading a team of analysts
- Information architects who want to gain expertise in Artificial Intelligence algorithms.
- Graduates looking to build a career in Artificial Intelligence and Machine Learning

## Data Science & Machine Learning (AI) Outline:

### Module 1: Foundations of Data Science & AI (15 Credit Hours)

- Introduction to AI & ML
- Data Science Workflow
- Python Fundamentals for Data Science

### Module 2: Math & Statistics Essentials (10 Credit Hours)

- Descriptive & Inferential Statistics
- Linear Algebra Fundamentals

### Module 3: Data Manipulation & Visualization (10 Credit Hours)

- Data Wrangling with Pandas
- Data Visualization with Matplotlib & Seaborn

### Module 4: SQL for Data Science (10 Credit Hours)

- Relational Databases & SQL Fundamentals
- Advanced SQL & Database Design

### Module 5: Supervised Learning (15 Credit Hours)

- Regression & Classification Algorithms
- Ensemble Methods

### Module 6: Unsupervised Learning & Dimensionality Reduction (10 Credit Hours)

- Clustering Techniques
- Dimensionality Reduction

### Module 7: Deep Learning Introduction (10 Credit Hours)

- Neural Networks Fundamentals
- Deep Learning Frameworks

### Module 8: Natural Language Processing (NLP) & Generative AI (10 Credit Hours)

- NLP Fundamentals
- Generative AI Introduction

### Module 9: Model Deployment & MLOps (10 Credit Hours)

- Model Deployment
- MLOps Fundamentals

## Training Solutions:

- ✓ Offline Classroom Instructor-Led Training in our labs or onsite Locations.
- ✓ Virtual Instructor-Led Training Via Virtual Video Conferencing Tools.

## Why Learners Prefer CLS as their Training Services provider ?

- Premium Training Services Accredited from Global Technology Vendors.
- Best Rated Experts & Certified Trainers in Egypt.
- Official Training Hours, Practice Labs, Hands-on Learning.
- CLS Training Classrooms are designed with High Edge PCs and Training Facilities.
- Return on Training Investment is Guaranteed to boost performance.

