



Machinfy Professional AI & Data Science

MPAIDS



Website
www.machinfy.com



Introduction

Data science is an interdisciplinary field that combines mathematics, statistics, computer science, and domain knowledge to extract meaningful insights from data. It involves a range of activities, from collecting and cleaning data to building models and algorithms to interpreting results and communicating findings. Its ultimate goal is to unlock the potential of data to solve problems, improve decision-making, and drive innovation across various industries.



Vision & Mission

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Our Vision

The top-rated professional educational training provider in the Middle East and North Africa

Our Mission

Our mission is to enhance technical and professional skills, augmenting market capabilities with exceptional proficiency for individuals and corporations alike.

Accreditations

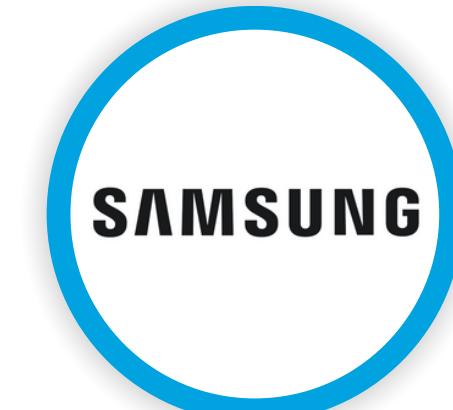
- Machinify holds prestigious endorsements from ISO, IAF, EGAC, and ITIDA, reflecting our dedication to excellence and industry recognition.
- Delivering programs tailored to market needs with updated content, ensuring trainees achieve their goals in line with current labor market demands.
- Facilitating the connection of highly skilled graduates with leading companies in the market, aiding them in launching their careers successfully.





Success Partners

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Why Machinfy?

Machinfy Academy is the only training institution that combines real-world expertise from experienced trainers, personalized mentor support, immersive interview simulations, and exceptional after-sales services to ensure our students' success both during and after their learning journey.

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-  **Certified Academy**
-  **Updated Content**
-  **Mentor Support**
-  **Experienced Trainer**
-  **Practical Projects**
-  **Long-Life Material Access**
-  **Graduation Project Presentation**
-  **Interview Simulation**
-  **Hiring/Internship Recommendations**
-  **Free Consultation**
-  **After-Sales Service and Support**
-  **Certified by ISO, ITIDA, and NQI**
-  **Friendly and Supportive Team**

Expected Outcomes

After completing the training program, you'll be able to:



Impress

your colleagues with professional data science and machine learning skills



Win

a career growth opportunities



Make

a data-driven decisions and drive a revenue growth



Automate

the daily tasks, reports and emails



Move

to the next position and improve your career path



Develop

advanced analytical skills



Increase

the quality, productivity and efficiency of your work



Merge

Data Science into your day-to-day work

Program Details

150
Training Hours

Internship/Hiring
Recommendation

From Scratch to
advanced Level

AI Powered
content





Program Content

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 Python	16 Hours	4 Sessions
 SQL	8 Hours	2 Sessions
 Mathematics	8 Hours	2 Sessions
 Data Analysis	20 Hours	5 Sessions
 Machine Learning	32 Hours	8 Sessions
 Deep Learning	8 Hours	2 Sessions
 Computer Vision	10 Hours	3 Sessions
 NLP	24 Hours	6 Sessions
 Deployment	8 Hours	2 Sessions
 Webscraping	4 Hours	1 Sessions
 MLOPS	4 Hours	1 Sessions
 Prompting	8 Hours	2 Sessions

Python Programming

- Tools setup
- Environment
- Run the first code
- Variables
- Data Types
- Flow Control
- If conditions
- Loops
- Functions
- Class
- Object



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Statistics

- Measures of central tendency
- Descriptive Statistics
- Distributions
- Central Limit Theorem
- Correlations and covariance
- Hypothesis testing
- A/B testing
- Conditional Probability
- Random Variables
- Bayesian Thinking and Modelling



Advanced Data Analysis

- Types of data
- Pandas
- Descriptive analysis
- Advanced Pandas
- Visualization
- Data Analysis Concepts
- Business Case
- Storytelling
- Color Theory in Data Analysis
- Capstone Projects



Linear Algebra & Preprocessing



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- Linear Algebra
- Vector/Matrix
- Matrix Operation
- Linear Equations
- Eigenvalue/Eigenvector
- NumPy
- Data Pre-processing
- Missing Values
- Categorical Data
- Outliers
- Normalization \ Standardization

Supervised Machine Learning



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- Simple Linear Regression
- Multi Linear Regression
- Poly Linear Regression
- Ridge Regression
- Lasso Regression
- Gradient Descent
- Regression Evaluation
- Logistic Regression
- KNN
- SVM
- Decision Trees and Random Forest
- Model Selection and Evaluation
- Time Series
- Univariate forecasting
- Decomposition
- Stationary test

Unsupervised Machine Learning



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- Clustering
- Dimensionality Reduction
- Content-based Recommendation System
- Article Recommender engine
- Collaborative-filtering Recommendation System
- Movie Recommender engine
- Open Websites using Requests
- Using BeautifulSoup
- Get Articles from online websites
- Gold Price

Deep Learning Architecture



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- Deep learning
- Intro to deep learning
- Neural network basics
- How Neural network learn
- Introduction to cnn
- CNN layers
- Introduction to rnn
- RNN layers
- Vanishing gradient problem

NLP & LLMs

- Understanding text data
- Text cleaning
- Text analysis
- Build your first sentiment analysis model
- RNN in detail
- LSTM
- Transformers
- BERT
- GPT
- LLM in detail
- RAG



Computer Vision

- Intro to open CV
- Filters
- Edge detection
- Object detection
- CNN
- GANs
- CV AI Tools



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Deployment and Big Data

- What is cloud computing?
- Which cloud provider is good?
- Relation between Cloud and Data Science
- Development phase vs production phase
- Development phase vs production phase
- Streamlit introduction
- What is cloud deployment
- What is API
- Hosting your project online



MLOps, and Prompting

- What is MLOps
- MLOps vs ml engineer vs data scientist
- Model monitoring
- MLOps tools
- What is prompt
- Prompt Engineering principles
- Bias and fairness in prompts
- End to end project with prompts



Certificate



CERTIFICATE

THIS IS CERTIFY THAT

Your Name goes here

EGYPTIAN - NID: Your National ID goes here

Has Successfully Passed the Training Program

Course Name goes here

Consisting of **70** Training Hours With Grade: **Very Good**



Issue Date: **2024-12-28**

Certificate No: **MFA-bb1-6c**

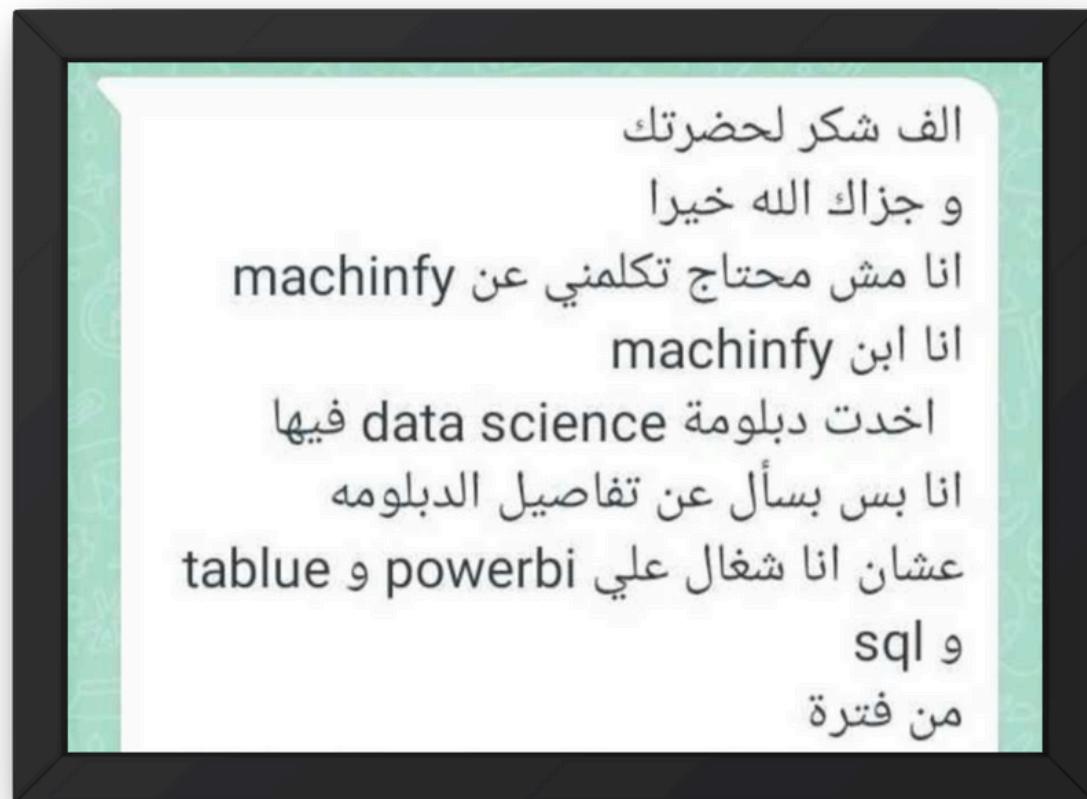
Sayed A. Omar

Manager Signature

Testimonials



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Have a Great Journey

Keep in Touch



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