ANALITIQA

DATA REIMAGINED

Certified Full Stack Artificial Intelligence Program

Prospectus

About Us

At **Analitiqa**, we believe that AI doesn't have to be complicated. Our mission is to simplify your journey into the world of data through structured, hands-on, and industry-ready education.

We are an **EdTech platform** built for **learners, career switchers, and working professionals** who want to master **Full Stack AI** from Python to Machine Learning, from SQL to MLOps and Gen AI with clarity, confidence, and real-world application in the form of Capstone Projects.

AI: The Language of Tomorrow's Jobs

Organizations that leverage data in decision-making are **23 times more likely to acquire customers**, **6 times as likely to retain them**, and **19 times as likely to be profitable**.

1.3 million new AI jobs created between 2023–2025, AI-related roles dominate LinkedIn's **"Jobs on the Rise 2026" list**

A **Glassdoor survey** listed "Data Scientist" among the **Top 3 Best Jobs in the US** for multiple years, based on salary, job satisfaction, and availability.

Curriculum

Module 1: Introduction

- Introduction to Data Science
- Introduction and Overview of Program
- Guide to LMS

Module 2: Python Programming

- Introduction to Python Programming
    1. Introduction to Python and Installation
    2. Jupyter Notebook
    3. Running Code from Terminal
    4. Google Colab
- Python Basics (Variables, Operators, Conditional Statements, Loops)
- Data Structures
    1. Lists
    2. Sets
    3. Tuples
    4. Dictionaries
- User Defined Functions
- Decorators, Docstrings
- Modularisation
- Lambda, Map, Filter, Reduce
- File Handling

- Exception Handling

Module 3: SQL for Data Science

- Basics of DBMS
- DBMS and Data Models
- Data Type, Operators, Key Attributes
- DML, DDL, DQL, TCL
- SQL Basics (SELECT, WHERE, ORDER BY, GROUP BY, HAVING)
- SQL Constraints and Aggregation Functions
- SQL Joins
- Subqueries, Stored procedure, Temporary table, Views
- Window and Ranking Functions

Module 4: Mathematics for Data Science

- Matrices, Determinants, Sets
- Functions
- Derivatives and Integration

Module 5: Statistics for Data Science

- What is Statistics?
- Population vs Sample
- Types of Variables
- Measure of Central Tendency
- Measures of Dispersion
- Covariance and Correlation
- Types of Categorical Plot

- Types of Continuous Plot
- Probability and its Applications
- Inferential Statistics
- Hypothesis Testing

Module 6: Python Packages

- Numpy Arrays
- Array Operations, Indexing, Slicing
- Broadcasting
- Working with NaN and missing data
- Introduction to Pandas
- Data Manipulation using Pandas
- Sorting, Filtering, Ranking, Aggregation Functions
- Working with Excel and CSV Files

Module 7: Data Visualisation

- Matplotlib
    1. Anatomy of Matplotlib (Figure, Axes)
    2. Line Charts, Bar Charts, Pie Charts, Scatter Plots
    3. Customising - Colors, Labels, Legends, Titles
    4. Plotting Multiple Variables
    5. Saving Plots as PNG/SVG
- Seaborn
    1. Distribution Plots (Histplot, Distplot)
    2. Categorical Plots (Box plot, Violin Plot)

3. Bivariate and Multivariate Plots (Scatter Plot, Heatmap)

- Plotly for Interactive Plots

Module 8: Power BI

- Introduction to Power BI
- Different Sections and Components
- Charts and Visuals
- Interactive Dashboard Creation

Module 9: Exploratory Data Analysis

- Introduction to EDA
- Univariate, Bivariate and Multivariate Analysis
- Missing Value Analysis
- Outlier Detection
- Column Standardisation
- Treating Categorical Variables
- Feature Importance and Feature Engineering

Module 10: ML Fundamentals

- Types of ML Problems
- Validation Techniques
- Curse of Dimensionality
- Handling Imbalanced Datasets
- Evaluation Metrices (Accuracy, Precision, Recall, F1-Score, ROC-AUC Curve
- Bias Variance Trade-off

Module 11: ML - Supervised Learning Part 1

- Naive Bayes

- Linear Regression
- Logistic Regression
- K- Nearest Neighbours (KNN)
- Support Vector Machine (SVM)
- Decision Trees

Module 12: ML - Supervised Learning

- Ensemble Methods
- Random Forests
- Boosting
    1. AdaBoost
    2. XGBoost
    3. LightGBM
    4. CatBoost

Module 13: ML - Unsupervised Learning

- Unsupervised Learning Basics
- K-Means Clustering
- Hierarchical Clustering
- DBSCAN

Module 14: Advanced ML And Model

- Cross-Validation Techniques
- GridSearchCV And RandomizedSearchCV

Module 15: Deep Learning – Part 1

- Introduction
- Perceptron and Neural Network Basics
- Loss Functions
- Backpropagation
- Batch Normalisation
- Optimisers

Module 16: Deep Learning – Part 2

- ANN, CNN and RNN Introduction
- Image Classification with CNN
    1. Padding
    2. Pooling
- RNN
- Time Series with LSTM

Module 17: Natural Language Processing

- Introduction to NLP
- NLP Pipeline
- Text Preprocessing
- Text Cleaning and Tokenisation
- Bag of Words (BOW), Word2Vec, TF-IDF
- POS Tagging

Module 18: Time Series Analysis

- Introduction to Time Series and Forecasting
- Components of Time Series

- Statistical Time Series Model (ARIMA and SARIMA)
- Adfuller Test, Seasonality and Trend Analysis
- AutoForecast
- Prophet

Module 19: MLOPS

- Docker
- ML Flow
- Airflow
- Fast APIs

Module 20: Generative AI AND LLMs

- Basics of Gen AI
- Langchain Overview and its Components
- Prompt Engineering
- Retrieval Augmented Generation (RAG)
- LLM and Fine Tuning

Module 21: Agentic AI

- Introduction
- LangGraph
- How to Build MCP Client
- Advanced Agentic Systems

Module 21: Final Capstone Project

To be Presented by Students for final Certification

Placement Assistance

Complete, Submit, Succeed—with our post-project support

Mock Interviews by Expert Data Scientists

Sharpen your interview performance with personalized practice

Resume Preparation Session

Build an impactful resume tailored for data science and analytics roles.

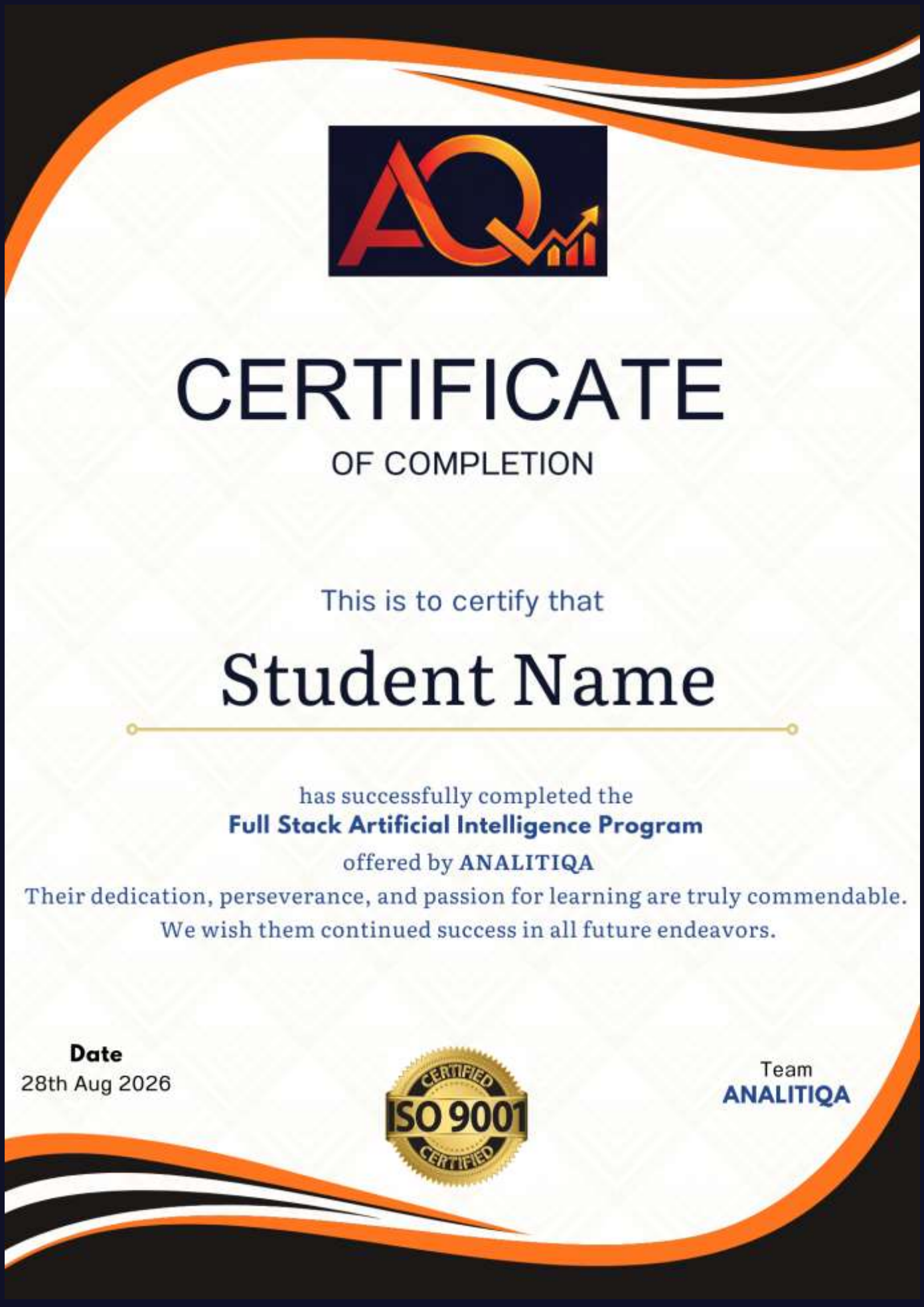
Job Portals Profile Optimization

Enhance your visibility on platforms like Naukri, LinkedIn, and Indeed.

GitHub Profile Optimization

Showcase your projects and code effectively to impress tech recruiters.

ISO Accredited Certificate



Contact Us

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