

DATA SCIENCE WITH AI

6-Month Course

Industry Expert Faculty

AI-Enabled Curriculum

Live Online Sessions



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A MESSAGE FROM THE CHAIRPERSON

I am delighted to welcome you to Digital Regenesys, part of the Regenesys Group. The purpose of Regenesys is to help individuals awaken their potential and achieve their dreams. New technologies, social media, and innovation have sparked a digital revolution that is rapidly changing the world. The digital revolution demands a new breed of professionals to succeed in the new digital world. To give you a competitive advantage, we have developed cutting-edge digital programmes in the areas of information technology and management. Our programmes are facilitated by leading experts, entrepreneurs, and academics from top local and international institutions

Regenesys is a global education institute with a presence in South Africa, India, Nigeria, Kenya, Tanzania, Croatia, Botswana, Mauritius, Zambia, Zimbabwe & Uganda, delivering cutting-edge online and contact learning programmes. Over the past 25 years, Regenesys has educated more than 500,000 students from 180+ countries and delivered corporate education programmes to 1000 reputable local and multinational companies. The majority of them are large multinationals such as Mercedes-Benz, Microsoft, Coca-Cola, Barclays, and Samsung, to name a few.

Regenesys alumni occupy top leadership positions in multinational corporations and government institutions all over the world, and form a very influential alumni network that supports its members with business opportunities across the world.

Get inspired, energised, and transform your career with programmes grounded in the realities of the new digital world.

**“I wish you success
on your journey towards greatness.”**

Dr Marko Saravanja
Founder & Chairperson, Regenesys Education



IITPSA ACCREDITATION: A MILESTONE FOR EXCELLENCE

Regenesys Education is accredited by the Institute of Information Technology Professionals South Africa (IITPSA).

Established in 1957, IITPSA is South Africa's leading professional body committed to growth of ICT Professionals and ensuring IT courses are high-quality, job-ready, and meet industry standards.

Why Is IITPSA Accreditation Important?

IITPSA accreditation is a hallmark of quality, affirming that Regenesys Education meets the highest standards in curriculum design, faculty expertise, and industry alignment.

It ensures our courses are recognised locally and internationally, providing our students with a competitive edge in the job market.



What are CPD Points?

CPD, or "Continuous Professional Development" refers to structured learning activities aimed at improving professional knowledge, skills, and competencies.

Purpose:

- To ensure professionals stay updated with the latest trends, tools, and best practices in their field.
- To maintain and enhance professional standards and career development.

Gain 39 CPD points through our IITPSA-accredited Data Science with AI Course, globally recognised for advancing careers and fostering professional growth.

ABOUT THE COURSE

The Data Science & AI course at Digital Regenesys prepares professionals for the rising demand to analyse data, build machine learning models and apply AI in practical business settings. This 6-month course covers Python programming, data analysis, machine learning, data visualisation, and AI integration using industry-relevant tools. Learners work hands-on with Pandas, Scikit-learn, PandasAI, Power BI Copilot, and ChatGPT to develop, test, and deploy predictive models.

Ethical data practices and responsible AI use are embedded throughout the course. Open to both beginners and experienced professionals, the course emphasises applied learning through real-world projects.

Here are some key statistics showing the continued growth of the data science and AI domains:

70%

of companies use or plan to use AI in analytics.

34%

growth in data scientist employment by 2034.

10% of tasks across 80%

of the workforce will be affected by AI by 2030.

1

Real-World Data Science & AI Projects:

Every concept is applied through hands-on projects that simulate real-world industry problems.

2

Proof of Work for Your Portfolio:

Build, document, and deploy multiple DS & AI projects to GitHub and showcase your applied skills to employers.

3

Live Model Deployment & Hosting:

Deploy ML models, dashboards, and AI-driven applications using Streamlit and PowerBI for real-world experience.

4

Modern Data Science & AI Tools Training:

Hands-on with Pandas, NumPy, Seaborn, Matplotlib, Scikit-learn, ChatGPT, PowerBI Copilot, Streamlit, and more.

CAREER OUTCOMES



- Data Scientist
- AI Engineer
- Machine Learning Engineer
- Deep Learning Engineer
- Data Engineer
- Business Intelligence Developer
- Data Analyst (AI-Enabled)
- Data Architect
- Database Administrator
- Applied AI Specialist
- Data Privacy & AI Governance Officer
- Data Translator / Analytics Consultant

GLOBALLY RECOGNISED CERTIFICATE



Upon completing the Data Science with AI course, you will receive a globally recognised and IITPSA-accredited certificate from Digital Regenesys. You will earn 39 CPD points, validating your expertise in data analysis, machine learning, and applied artificial intelligence. The certification highlights your ability to work with real-world datasets, build and deploy predictive models, apply AI-assisted analytics, and create data-driven insights using modern tools. It also shows your understanding of ethical data practices and responsible AI use, helping you prepare for advanced Data science and AI-focused roles.

COURSE HIGHLIGHTS



Structured Skill Progression:

Curriculum moves from Python fundamentals and problem-solving to advanced machine learning, AI workflows, and deployment.



Data Analysis to Insight Pipeline:

Learn data cleaning, preprocessing, feature engineering, and visualisation techniques.



Machine Learning Core Coverage:

Build competence in regression, classification, and clustering methods, with a focus on model evaluation and optimisation.



Business Intelligence Integration:

Gain practical experience in data transformation and integration with Power BI.



AI-Assisted Data Workflows:

Use modern AI tools to support analysis, automation, and coding assistance within data science projects.

WHO SHOULD ENROL

The Data Science with AI course at Digital Regenesys is designed for learners seeking to build or strengthen careers in data-driven and AI-enabled roles. The course is suitable for individuals who want to analyse data, build machine learning models, and apply AI tools within real business and research contexts, including:



College Students (CS/IT)

Final-year or pre-final-year students in Computer Science, IT, or related fields.



Recent Graduates

Fresh graduates with theoretical understanding but no project experience.



Freelancers & Entrepreneurs

People wanting to build AI-powered applications, dashboards, or analytics solutions for clients.



Domain Experts / Professionals

Professionals in finance, healthcare, marketing, or other industries.



Managers & Decision-Makers

Business leaders looking to leverage DS & AI for strategic decisions.



Academics & Researchers

Research professionals aiming to integrate DS/AI in studies.

LEARNING OUTCOMES

Build a strong foundation in Python by mastering variables, data types, loops, and conditionals for problem-solving.

Leverage Python for automation, data manipulation, and visualisation to extract insights from complex datasets.

Apply data exploration techniques and predictive modelling to uncover insights and drive data-driven

Transform raw data into meaningful insights by creating interactive dashboards and reports using Power BI.

Develop and evaluate machine learning models for regression, classification, and clustering to solve real-world problems.

Learn to deploy data science projects by building web apps, integrating models into client-server setups, and handling data processing for seamless functionality.

COURSE CURRICULUM

Module 1

Python Programming Foundations

- 🔗 Environment Setup
- 🔗 Variables & Data Types
- 🔗 Computations Using Arithmetic Operators
- 🔗 Non-Primitive Data Types
- 🔗 Conditional & Looping Statements
- 🔗 AI Focus Tool - Python Tutor

Learning outcome: Build a strong foundation in Python by mastering variables, data types, loops, and conditionals for problem-solving.

Module 2

Applied Python for Data Applications

- 🔗 Functions
- 🔗 Object-Oriented Programming
- 🔗 Automation with Python
- 🔗 Data analysis with Numpy & Pandas
- 🔗 Data visualisation with Seaborn
- 🔗 AI Focus Tool - Colabs+Gemini / Jupyter + Anaconda AI Assistant

Learning outcome: Leverage Python for automation, data manipulation, and visualisation to extract insights from complex datasets.

Module 3

Data Exploration & Insight

- 🔗 Exploratory Data Analysis
- 🔗 Handling Data Discrepancies, Statistics -Descriptive Statistics, IQR in Detail, Skewness, Normal Distribution
- 🔗 Univariate, Bivariate & Multivariate Analysis
- 🔗 Feature Engineering
- 🔗 Predictive Modelling
- 🔗 AI Focus Tool - PandasAI

Learning outcome: Apply data exploration techniques and predictive modelling to uncover insights and drive data-driven decisions.

Module 4

Business Intelligence & Data Visualisation with Power BI

- 🔗 Connecting to Different Data Sources
- 🔗 Data Pre-Processing and Transformation
- 🔗 Creating and Formatting Charts
- 🔗 Report Building
- 🔗 AI Focus Tool - PowerBI Copilot

Learning outcome: Transform raw data into meaningful insights by creating interactive dashboards and reports using Power BI.

Module 5

Machine Learning for Predictive Analytics

- 🔗 ML WorkFlow: Machine Learning for Regression, Classification & Clustering
- 🔗 Evaluation Metrics
- 🔗 Model Tuning Techniques

Learning outcome: Develop and evaluate machine learning models for regression, classification, and clustering to solve real-world problems.

Module 6

Data Science Project Deployment

- 🔗 Understanding Client-Server Architecture
- 🔗 Fundamentals of Front-End and Back-End Development
- 🔗 Data Processing and Model Integration for Deployment
- 🔗 AI Focus Tool - ChatGPT

Learning outcome: Learn to deploy data science projects by building web apps, integrating models into client-server setups, and handling data processing for seamless functionality.

SELF-PACED LEARNING MODULES

Take control of your learning journey with recorded classes, interactive exercises, and case studies available to you anytime, anywhere.

Spreadsheets Essentials with Excel

What You Will Learn

- ◆ Introduction to Excel
- ◆ Data Entry and Formatting
- ◆ Formulas and Functions
- ◆ Data Management and Cleaning
- ◆ Tables and Named Ranges
- ◆ Charts and Visualisation

Tableau

What You Will Learn

- ◆ Installation and Interface Overview
- ◆ Connecting to Data Sources
- ◆ Data Handling in Tableau
- ◆ Visualisations with charts
- ◆ Filters
- ◆ Sorting
- ◆ Calculated Fields
- ◆ Formatting and Aesthetics
- ◆ Dashboards
- ◆ Publishing and Sharing

Data Management using MySQL

What You Will Learn

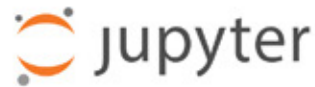
- ◆ DDL commands
- ◆ DML commands
- ◆ Keys
- ◆ Clauses
- ◆ Condition
- ◆ Aggregate functions

MongoDB

What You Will Learn

- ◆ Introduction to NoSQL and MongoDB
- ◆ MongoDB Installation and Setup
- ◆ MongoDB Architecture and Data Model
- ◆ Data Types
- ◆ CRUD Operations
- ◆ Logical Operations

TOOLS COVERED IN THIS COURSE



COURSE FEE

South Africa  R55,100	Tanzania  TSh5,760,500	Uganda  UGX7,174,500	Nigeria  ₦2,984,600	Kenya  Ksh286,520
India  ₹275,500	USA  \$3,074	Botswana  P48,761	Namibia  \$49,590	Zimbabwe  ZWG75,136
Zambia  ZMW68,503	Mauritius  MURs153,911	Lesotho  LSL55,100	Eswatini  SZL55,100	



OUR GLOBAL NETWORK

We Have Students Thriving in over 180 countries, Supported By Our Offices In Eleven Key Locations Worldwide!



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