



Data Science with AI Certification program

Offline / Hybrid mode of training

95% Success Rate

350+ hiring partners

 www.palin.co.in



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About Us

www.palin.co.in

Palin Analytics is a leading edtech and consulting firm specializing in data Science, business intelligence, and technology-driven training solutions. With a strong focus on skill development and career transformation, we equip individuals and professionals with the expertise needed to excel in the ever-evolving world of data.

At Palin Analytics, we offer a wide range of training programs covering Advanced Excel, SQL, Power BI, Python, and Data Analytics, designed to meet industry standards. Our hands-on, project-based learning approach ensures that learners gain practical experience with real-world datasets and business scenarios.

What sets us apart is our team of expert trainers, who bring years of industry experience across various domains, including finance, healthcare, retail, and e-commerce. We focus on live projects, case studies, and industry-specific assignments, ensuring our learners develop job-ready skills.



Flexible Learning Modes



Industry Experienced Trainers



Certifications & Recognition



Hands-on Learning Approach



Personalized Mentorship



Comprehensive Curriculum



Live Projects & Case Studies



Placement Assistance

LEARNING OBJECTIVE



Understand Data Analytics Concepts

Gain a strong foundation in data analytics, including data types, structures, and key analytical processes.



Master Advanced Excel

Perform data cleaning, analysis, and visualization using functions, pivot tables, Power Query, and advanced formulas.



Work with SQL for Data Handling

Write complex SQL queries to extract, manipulate, and analyze data from relational databases.



Develop Interactive Dashboards

Build insightful reports & dashboards using Power BI, including DAX functions and data modeling.



Learn Python for Data Analytics

Use Python libraries like Pandas, NumPy, and Matplotlib for data wrangling, visualization, and analytics.

LEARNING OBJECTIVE



Perform Data Cleaning & Transformation

Apply best practices to clean, preprocess, and transform raw data for accurate analysis.



Create Data Visualizations

Design compelling charts, graphs, and reports to communicate insights effectively.



Analyze Business Data for Decision-Making

Use real-world case studies to derive insights that drive business growth and efficiency.



Develop Problem-Solving Skills

Apply analytical techniques to solve business challenges using data-driven approaches.



Work on Real-World Projects

Gain hands-on experience with industry-relevant datasets and projects to build a strong portfolio.

DETAILS OF THE PROGRAMS

Courses are designed for beginners and professionals looking to upskill their knowledge. However, having the following prerequisites will help in better understanding

● Basic Computer Skills

Familiarity with using computers, managing files, and working with software applications.

● Understanding of Spreadsheets

Basic knowledge of Excel or Google Sheets (working with tables, basic formulas, and formatting).

● Logical & Analytical Thinking

Ability to approach problems logically and analyze data patterns.

● Basic Mathematics & Statistics (Recommended but Not Mandatory)

Familiarity with concepts like mean, median, standard deviation, and percentages will be helpful.

● No Prior Programming Knowledge Required

The course covers Python and SQL from scratch, making it beginner-friendly.

● Interest in Data & Problem-Solving

A keen interest in working with data, deriving insights, and making data-driven decisions.



Eligibility



Students & Fresh Graduates

B.Tech, B.Sc, B.Com, BBA, MBA, or any other degree holders looking to enter into industry.



Working Professionals

Professionals from IT, finance, marketing, operations, HR, and other domains looking to upskill or transit their career.



Business Analysts & Consultants

Individuals who want to strengthen their skills for data-driven industry.



Entrepreneurs & Business Owners

Those who wish to leverage data for business insights and strategic growth.

KEY FEATURES OF DATA SCIENCE TRAINING

Comprehensive Curriculum

Comprehensive curriculum designed to equip you with in-demand skills and real-world expertise.

Industry-Expert Trainers

Learn from industry expert trainers with hands-on experience and deep domain knowledge.

Live Projects & Capstone Assignments

Work on industry-relevant projects to build a strong portfolio.

Interactive Sessions

Engage in interactive sessions for practical learning and real-time problem-solving. 40 instructor-led sessions (2 hours each) with live demonstrations and Q&A.

Flexible Learning Modes

Online, offline, and hybrid training options available.

KEY FEATURES OF DATA SCIENCE TRAINING

Hands-on Learning Approach

Practical, project-based training with real-world case studies and projects.

Placement Assistance

Resume building, interview preparation, and job referrals through our hiring network.

Certification

Earn an industry-recognized certificate upon course completion.

Personalized Mentorship

One-on-one doubt-clearing sessions and career guidance.

Affordable & Value-Packed

High-quality training at competitive pricing.

JOB ROLES WE CAN TARGET IN DATA SCIENCE

1

Data Analyst

Analyze data, generate reports, and provide insights for business decision-making.



2

Business Analyst

Use data to understand business trends, improve processes, and support strategic decisions.



3

Power BI Developer

Design and develop interactive dashboards and reports using Power BI.



4

Data Visualization Specialist

Create compelling visualizations to present complex data insights clearly.



5

Reporting Analyst

Develop automated reports and dashboards to track business performance.



6

MIS Analyst

Manage and analyze management information systems (MIS) for operational efficiency.



JOB ROLES WE CAN TARGET IN DATA SCIENCE

Data Architect

Software Engineer - Data

Data Engineer

Data Pipeline Developer

ETL Developer

Database Administrator

Cloud Data Engineer

BI (Business Intelligence) Engineer

Analytics Engineer

Data Operations Engineer (DataOps)

Big Data Engineer

Machine Learning Engineer

Data Platform Engineer

Data Analyst

Our Trainers



SAURABH GOE

Data Science | Business Intelligence | Machine Learning

Saurabh Goel is a seasoned Data Science & Business Intelligence Trainer with extensive expertise in SQL, Power BI, Advanced Excel, and Python for Data Analytics, Machine Learning, Deep Learning, Artificial Intelligence. With a strong background in data visualization, reporting, and analytics, he has successfully trained professionals and students to excel in data-driven careers.

PROFESSIONAL EXPERIENCE

- 15+ years in data analytics, business intelligence, and corporate training.
- Worked in various industries, including finance, e-commerce, and supply chain management.
- Conducted corporate & professional training sessions for MNCs and startups.
- Mentored hundreds of students and working professionals, enabling them to secure roles in analytics.



ADITYA KUMAR

Generative AI | Python | PySpark | RStudio | Azure ML | SAS | SQL

Seasoned leader at the intersection of artificial intelligence, real-world evidence, and life sciences, with 15+ years of experience driving innovation in healthcare and life sciences business functions. My expertise spans pharmacoepidemiology research, clinical trials, medical affairs, and patient-centered outcome research, backed by advanced training in health economics and real-world data analysis.

PROFESSIONAL EXPERIENCE

- Real-World Evidence (RWE): Delivering actionable insights through statistical and economic modeling, quality improvement programs, and value-based care models.
- AI and Data Science Solutions: Designing and implementing cutting-edge supervised/unsupervised ML models, natural language processing, and deep learning applications like image processing and speech recognition.
- Healthcare Analytics: Optimizing claims management, fraud detection, cost utilization, and quality measures evaluation for payers and providers

Program Innovations :

Palin Analytics, our Live Project Innovation Lab is designed to provide hands-on experience with real-world business challenges, bridging the gap between theoretical knowledge and practical application. This initiative empowers learners to apply SQL, Power BI, Advanced Excel, and Python to industry-specific projects under expert guidance.



1

Domains

Palin Analytics offers Domain Elective Training in Data Analytics, enabling learners to specialize in specific industries. This approach ensures that students not only gain technical skills but also develop domain expertise, making them job-ready for targeted industries.

◆◆ Finance & Banking Analytics

- ◆ Risk assessment & fraud detection
- ◆ Credit scoring & loan analytics
- ◆ Customer segmentation & investment strategies
- ◆ Financial forecasting & stock market trends

◆◆ Healthcare & Pharma Analytics

- ◆ Patient data management & predictive diagnostics
- ◆ Hospital resource optimization
- ◆ Drug effectiveness & clinical trial analysis
- ◆ Medical insurance fraud detection

◆◆ E-Commerce & Retail Analytics

- ◆ Customer behavior analysis & recommendation systems
- ◆ Demand forecasting & inventory management
- ◆ Price optimization & sales trend analysis
- ◆ Customer lifetime value & churn prediction

◆◆ Marketing & Customer Insights Analytics

- ◆ Digital marketing campaign performance tracking
- ◆ Sentiment analysis & brand reputation management
- ◆ Customer segmentation for targeted advertising
- ◆ ROI measurement for marketing strategies

◆◆ Supply Chain & Logistics Analytics

- ◆ Route optimization & fleet management
- ◆ Warehouse inventory forecasting
- ◆ Vendor performance evaluation
- ◆ Demand & supply planning

HR & Workforce Analytics

- ◆ **Employee attrition & retention analysis**
- ◆ **Performance evaluation & productivity measurement**
- ◆ **Recruitment trend analysis**
- ◆ **Salary benchmarking & workforce planning**

Telecom & Network Analytics

- ◆ **Customer churn prediction**
- ◆ **Network optimization & fault detection**
- ◆ **Customer segmentation for targeted promotions**
- ◆ **Call data & usage pattern analysis**

Energy & Utilities Analytics

- ◆ **Smart grid data analysis**
- ◆ **Power consumption & demand forecasting**
- ◆ **Renewable energy optimization**
- ◆ **Equipment failure prediction**

Each domain elective includes real-world case studies, industry datasets, and hands-on projects to ensure that learners develop the required expertise.

2

Certification



Data Science Certifications

- **Tableau Desktop Specialist** – Validate your skills in building visual analytics and dashboards.
- **Microsoft Power BI Data Analyst** – Showcase your expertise in creating interactive reports and business insights.
- **Google Data Analytics Professional Certificate** – Master data analysis and visualization techniques.
- **AWS Certified Data Analytics – Specialty** – Demonstrate advanced data analytics skills on AWS.



Cloud Computing Certifications

- **Microsoft Certified: Azure Fundamentals** – Establish foundational knowledge of Azure cloud services.
- **Google Cloud Digital Leader** – Validate your ability to apply cloud technology for business transformation.
- **Azure Data Engineer Associate** – Showcase your expertise in designing and implementing data solutions on Azure.

3 Placement Support

Palin Analytics, we are committed to ensuring that every learner successfully transitions into a rewarding career in Data Analytics. Our placement support provides continuous assistance for up to one year, offering multiple interview opportunities until you secure a job.

Mock Interviews

Palin Analytics, we prepare our learners for real-world job interviews by conducting Mock Interviews with industry professionals. These sessions help candidates gain confidence, improve technical skills, and refine communication to ace their job interviews.

ATS Friendly Resume

Palin Analytics, we ensure that every learner has an ATS-friendly resume to increase their chances of getting shortlisted for job interviews. Applicant Tracking Systems (ATS) are used by companies to filter resumes before they reach recruiters. Our expert-designed resumes help you bypass these filters and land more interview calls!

Interview Calls

Palin Analytics, we ensure that our learners get maximum job opportunities through regular interview calls from top companies across multiple industries. Our dedicated Placement Assistance Program helps candidates secure jobs in Data Analytics, Business Intelligence, and related roles.



- **Introduction to Excel for Analytics Overview**
- **Importance of Excel in data analysis**
- **Excel interface and basic navigation**
- **Essential Excel Functions for Data Analysis**
- **Understanding and using basic functions (SUM, AVERAGE, COUNT)**
- **Working with mathematical and statistical functions**
- **Text functions for data cleaning and manipulation**
- **Logical functions (IF, AND, OR)**
- **Data Import and Cleaning in Excel**
- **Importing data from various sources (CSV, Excel, databases)**
- **Data cleaning techniques and best practices Handling missing data**
- **Data Visualization in Excel**
Creating basic charts (bar charts, line charts, pie charts)
- **Introduction to PivotTables**
- **PivotTables and PivotCharts**
- **Creating PivotTables for data summarization**
- **Building PivotCharts for visual analysis**
- **Advanced Excel Functions for Analytics**
- **Data Analysis with Excel Tables**
- **Introduction to Excel Tables**



- **Introduction to Databases and SQL**
- **Understanding Databases**
- **Definition and types of databases**
- **Relational databases Non-relational databases**
- **Introduction to SQL What is SQL?**
- **SQL history and evolution**
- **Importance of SQL in the industry**
- **Basic SQL Commands**
- **Filtering data using WHERE clause**
- **Retrieving data from a single table**
- **Advanced Querying**
- **Data Modification**
- **COMMIT and ROLLBACK statements**
- **Constraints (PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK)**
- **Aggregate functions (SUM, AVG, COUNT, MIN, MAX)**
- **Stored Procedures and Functions**
- **Creating stored procedures**
- **Input and output parameters**
- **User-defined functions**
- **Database Security**
- **User roles and permissions**
- **GRANT and REVOKE statements**
- **Securing sensitive data**
- **Introduction to NoSQL Databases**
- **Overview of NoSQL databases**
- **Best Practices and Optimization**
- **Writing efficient queries**
- **Query optimization techniques**
- **Case Studies and Real-world Applications**
- **Analyzing real-world scenarios**
- **Building practical solutions with SQL**
- **Views and Indexes**
- **Creating and managing views**
- **Indexes and their impact on performance**
- **Data Filtering and Aggregation**



Power BI

- Overview of Power BI
- Power BI ecosystem and components
- Getting started with Power BI Desktop
- Power BI service overview



Data Sources and Data Transformation

- Connecting to different data sources (Excel, databases, cloud services)
- Loading and transforming data using Power Query Editor
- Data modeling and relationships



Power BI Desktop Essentials

- Building and designing reports
- Creating visuals (tables, charts, maps, etc.)
- Formatting and customizing visuals
- Using themes and templates



Advanced Data Modeling

- DAX (Data Analysis Expressions) fundamentals
- Creating calculated columns and measures
- Time intelligence functions
- Hierarchies and drill-downs



Power BI Service and Collaboration

- Publishing reports to Power BI service
- Creating and sharing dashboards
- Setting up and managing workspaces



Power BI Data Insights

- Creating and using Quick Insights
- Analyzing data trends and patterns
- Building advanced analytics with AI visuals
- Exploring and interpreting data insights



Power BI Integration

- Integrating Power BI with Excel
- Embedding Power BI reports in other applications
- Using Power BI REST API for automation
- Power BI and Azure integration



Power BI Administration and Security

- Power BI Gateway setup and configuration
- Managing data refresh schedules
- Implementing row-level security
- Monitoring and managing Power BI workspaces



Power BI Best Practices and Optimization

- Performance optimization techniques
- Designing efficient data models
- Report and dashboard optimization
- Best practices for data visualization



Power BI Certification and Next Steps

- Overview of Power BI certifications
- Exam preparation tips and resources
- Continuing learning paths and resources



Python

- Overview
- The Python Ecosystem
- Why Python over R/SAS
- What to expect after you learn Python



Getting Started

- Understanding and choosing between different Python versions
- Setting up Python on any machine (Windows/Linux/Mac)
- Using Anaconda, the Python distribution
- Exploring the different third-party IDEs (PyCharm, Spyder, Jupyter, Sublime)
- §Setting up a suitable Workspace
- Running the first Python program



Python Basics

- Python Syntax
- Interactive Mode/ Script Mode Programming
- Identifiers and Keywords
- Single and Multi-line Comments
- Data Types in Python (Numbers, String, List, Tuple, Set, Dictionary)
- Implicit and Explicit Conversions
- Understanding Operators in Python
- Working with various Date and Time formats
- Working with Numeric data types – int, long, float, complex
- String Handling, Escape Characters, String Operations
- Working with Unicode Strings
- Local and Global Variables



Programming with python

- Flow Control and Decision Making in Python
- Understanding if else conditional statements
- Nested Conditions
- Working in Iterations
- Understanding the for and while Loop
- Nested Loops
- Loop Control Statements– break, continue, pass
- Understanding Dictionary- The key value pairs
- List Comprehensions and Dictionary Comprehensions
- Functions, Arguments, ReturnStatements
- Packages, Libraries and Modules
- Error Handling in Python



Working with data - Data from external sources

- Reading data from files (TXT, CSV, Excel,JSON, KML etc.)
- Writing data to desired file format
- Creating Connections to Databases
- Importing/Exporting data from/to NoSQL databases (MongoDB)
- Importing/Exporting data from/to RDBMS (PostgreSQL)
- Getting data from Websites
- Manipulating Configuration files



Data Wrangling

- Introduction to Data Wrangling Techniques
- Why is transformation so important
- Understanding Database architecture – (RDBMS, NoSQL Databases)
- Understanding the strength/limitations of each complex data containers
- Understanding Sorting, Filtering, Redundancy, Cardinality, Sampling, Aggregations
- Converting from one Data Type to another



Numpy, Pandas & Matplotlib

- Introduction to Numpy and its superior capabilities
- Understanding differences between Lists and Arrays
- Understanding Vectors and Matrices, Dot Products and Matrix Products
- Universal Array Functions
- Understanding Pandas and its architecture
- Getting to know Series and DataFrames, Columns and Indexes
- Getting Summary Statistics of the Data
- Data Alignment, Ranking & Sorting
- Combining/Splitting DataFrames, Reshaping, Grouping
- Identifying Outliers and performing Binning tasks
- Cross Tabulation, Permutations, the apply() function
- Introduction to Data Visualization
- Line Chart, Scatterplots, Box Plots, Violin Plots
- Understanding Probability Distribution
- Histograms, Heat maps and Clustered Matrices
- Plotting Kernel Density Estimate Plots



GIT

- Introduction to VCS
- Why is it Absolutely Necessary for a programmer to use VCS
- Understanding the concepts of GIT
- Collaborative development using GIT
- Understanding services like GitHub and BitBucket
- Thorough understanding of all the GIT commands (pull, clone, status, commit, push, merge etc.)
- Creating and Maintaining repositories for Projects
- How can you contribute to Open-Source



Statistics For Business Analytics

• Continuous and Discrete variables

- Understanding Distributions
- Standard Deviation, Normal Distribution, Skewness
- Mean, Median, Mode
- Comparing Infinities
- Cantor's Diagonal Argument
- Understanding the concept of Population and Samples
- Sampling Distribution
- Central Limit Theorem – Intuition & Visualization
- Calculating Z-Score
- Introduction to Hypothesis Testing
- Assumptions, Rejection Region
- Calculating Statistical Significance
- Understanding Null Hypothesis and T-Distribution
- Introduction to Pareto Principle



Machine Learning

- What is Machine Learning
- Applications of Machine Learning
- Setting up the working environment



Data Pre-Processing

- Importing the Dataset
- Handling missing data
- Handling Categorical data
- Splitting the dataset into training and test dataset
- Feature Scaling



Regression Modelling

- Simple Linear Regression
- Multiple Linear Regression
- Polynomial Regression
- Support Vector Regression



Classification

- **Logistic Regression**
- **K-Nearest Neighbours (K-NN)**
- **Support Vector Machines**
- **Kernel SVM**
- **Naive Bayes Classifier**
- **Decision Tree Classification**
- **Random Forest Classification**



Unsupervised Learning

- **Clustering – Intuition**
- **K-Means Clustering**
- **Hierarchical Clustering**



Dimensionality Reduction

- **Principal Component Analysis (PCA)**
- **Linear Discriminant Analysis (LDA)**
- **Understanding Kernel PCA**



Model Selection & Boosting

- **Understanding the need for Model Selection**
- **What is Overfitting**
- **Understanding Bias Variance Trade-off**
- **K-Fold Cross Validation**
- **Understanding and applying Grid Search**



Generative AI Curriculum

- **Fundamentals of AI & Machine Learning**
- **What is AI, ML, Deep Learning, and Generative AI?**
- **Types of Machine Learning - Introduction to Neural Networks - Activation Functions - Backpropagation and Optimizers**
- **Evaluation Metrics (Accuracy, Precision, Recall, F1, ROC-AUC)**



Deep Learning Essentials

- Deep Neural Networks (DNNs)
- Convolutional Neural Networks (CNNs)
- Recurrent Neural Networks (RNNs)
- Long Short-Term Memory (LSTM)
- Transformers (basic idea)

- Tools: TensorFlow, Keras, PyTorch



Natural Language Processing (NLP)

- Text Preprocessing (Tokenization, Lemmatization)
- Word Embeddings (Word2Vec, GloVe, FastText)
- Sequence Modeling
- Attention Mechanism
- Transformer Architecture (Encoder-Decoder) Generative AI Curriculum
- Pretrained Language Models: BERT, GPT

- Tools: Hugging Face Transformers, NLTK, SpaC



Introduction to Generative Models

- What are Generative Models?
- Autoencoders (AEs) - Variational Autoencoders (VAEs) - Generative Adversarial Networks (GANs)
- Conditional GANs (cGANs)
- Diffusion Models (Stable Diffusion, DALL·E)

- Projects: - Face generation using GAN
- Image denoising using Autoencoders
- Text-to-Image generation with Stable Diffusion



Large Language Models (LLMs)

- Architecture of GPT (GPT-2, GPT-3, GPT-4, ChatGPT) - Tokenization & Attention - Prompt Engineering Basics - Fine-tuning & Transfer Learning - Reinforcement Learning with Human Feedback (RLHF) - Safety and Bias in LLMs Generative AI Curriculum
- Tools: OpenAI API, LangChain, Transformers (HuggingFace), Vertex AI



Prompt Engineering

- Prompt structure (Zero-shot, Few-shot, Chain-of-Thought)
- System vs User vs Assistant prompts
- Writing effective prompts
- Prompting for multi-modal tasks



Applications of Generative AI

- Text Generation - Image Generation (DALL·E, MidJourney, Stable Diffusion)
- Video Generation (Sora, RunwayML)
- Code Generation (GitHub Copilot, OpenAI Codex)
- Music Generation (Jukebox)
- Voice Cloning (ElevenLabs, Resemble.ai)



Building Gen AI Projects

- ChatGPT clone
- AI resume builder
- Generative AI + Search (RAG)
- Personalized Email/Message Generator
- AI Teaching Assistant
- AI Art Generator Genera



Deployment & Scaling

- **Deploying apps using Streamlit, Gradio, Flask + OpenAI API**
- **Using cloud platforms (GCP, AWS, Azure)**
- **Caching with Redis**
- **Securing LLM APIs**



Ethics, Risks & Future Trends

- **Data Privacy in Gen AI - Deepfakes and misuse**
- **Hallucinations in LLMs**
- **Copyright concerns**
- **Future of AGI (Artificial General Intelligence)**