Wikipidia Academy

ADVANCED DATA SCIENCE & AI COURSE

Training With **Real Work Experience** From **Industry**

- 2 months Incubation with Industry Experts
- Internship: 3 to 6 months
- Course completion + IBM Certificate
- Stand a chance to pitch for an Investment
- Interactive sessions with US Embassy Consulate
- Special sessions with CEOs & senior executives from Top MNCs
- Global Mentorship from leading Business partners in AI
- DOMAIN BASED PROJECTS WITH CERTIFICATE

ABOUT US

We at WIKIPIDIA Academy, understand the need of the students for practical experience in today's competitive world. Along with the academic knowledge, hands on work is necessary for any person to depict the effectiveness of his skillset. Hence, we believe in providing the quality courses from highly skilled faculty who are hired based on their industry as well as academic proficiency.

Our Expert Data Science and AI Course features directly working with top companies/startups from the industry on real-time projects which would enhance your profile and guarantee a job in the data science field.

CONTACT US

📞 +91 8296674514

🌐 https://wikipidia.in/

✉️ info@wikipidia.in

PROGRAM HIGHLIGHTS

Projects & Certification
Work on projects with top startups and receive a certificate

Domain specialized Tracks
Work in your domain for a career transition in Data Science

Get Hired
Crack interviews in the top tier-1 product-based MNCS

Live Sessions
9 MONTHS OF LIVE INTERACTIVE SESSIONS

100% Guaranteed Job Referral
Receive guaranteed job referrals in top companies

Customize Your Project
Bring your own project ideas and it can become reality with mentors.

PROGRAM DETAILS

Projects & Certification
- Working experience of 1+ years is recommended
- Basic computer knowledge
- Some understanding of High School level of Mathematics

WHO SHOULD APPLY?
- Professionals from any industry
- Looking to switch into a Data Science role.
- Data Scientists looking to upskill their knowledge.
- People wanting to pursue a Master's or Doctorate program in Data Science.

PROGRAM PREREQUISITE
No prerequisite is required as we cover everything from basics.

COURSE DETAILS

Basic ₹ 29,900 (+GST)
- Get foundational Data Science training
- Receive expert-level job assistance
- Get 1 year course subscription
- Avail 3+ Job referrals

Advanced ₹ 49,900 (+GST)
- Get adept Data Science training
- Earn real-work experience
- 3 years of course subscription
- Receive domain training
- Avail 5+ Job referrals

Expert ₹ 79,900 (+GST)
- Get Pro-level Data Science training
- 100% Guaranteed Job Referral
- 3 years of course subscription
- Receive specialized domain training
- Avail unlimited job referrals

COURSE
DURATION

Weekday Batches: 8 Months

📅 Monday - Friday

🕐 8 am - 10 am | 8 pm- 10 pm

Weekend Batch: 9 Months

📅 Saturday & Sunday

🕐 9 am - 12 pm

AGENDA FOR
COUNSELING

- Is Data Science right for you?
- Can a non-programmer learn AI?
- Is it worth investing this amount of money?
- About project experience in AI/ML.

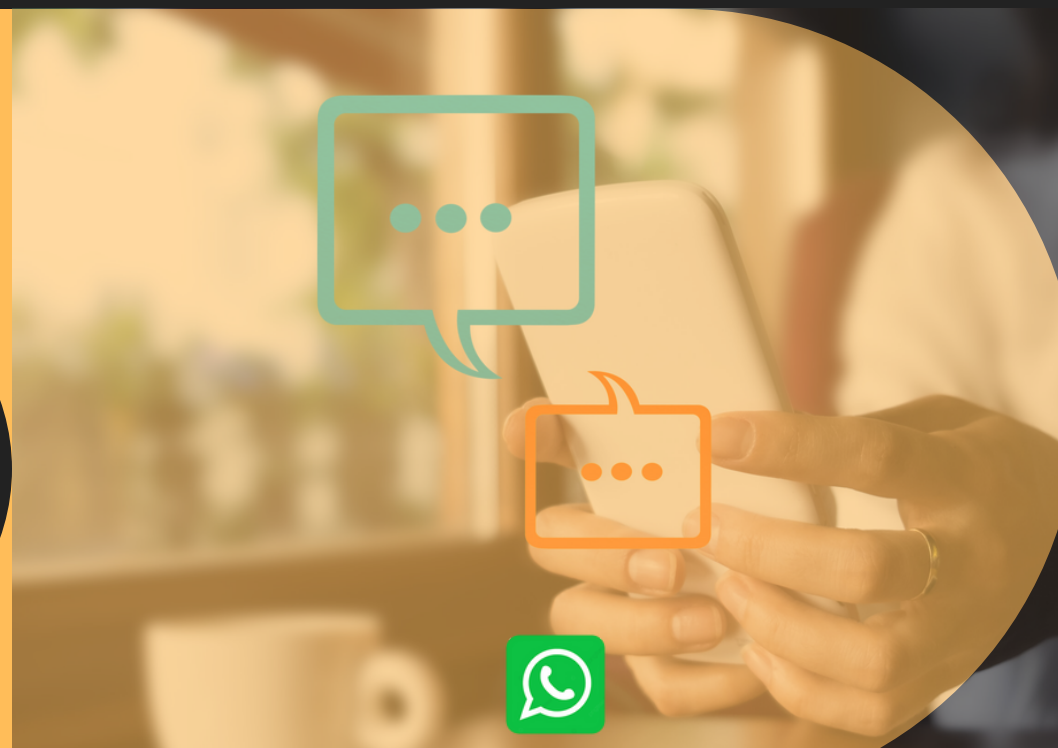# ABOUT PROJECT
CERTIFICATION

Work directly with top companies on Live Projects and get hands-on experience. Earn a project experience certificate by working alongside top startups to show it as a genuine work experience and enhance your profile. Stand out among applicants with a strong portfolio backed by useful skill and relevant work experience.

Live Chat On WhatsApp

Book a slot with an Expert for Review and Counselling

📞 Telephonic: 20 Minutes

WHY CHOOSE US

1
Project Experience Certificate

Work directly with top companies on Live Projects and get hands-on experience. Earn a project experience certificate by working alongside top startups to show it as a genuine work experience and enhance your profile Stand out among applicants with a strong portfolio backed by useful skills and relevant work experience.

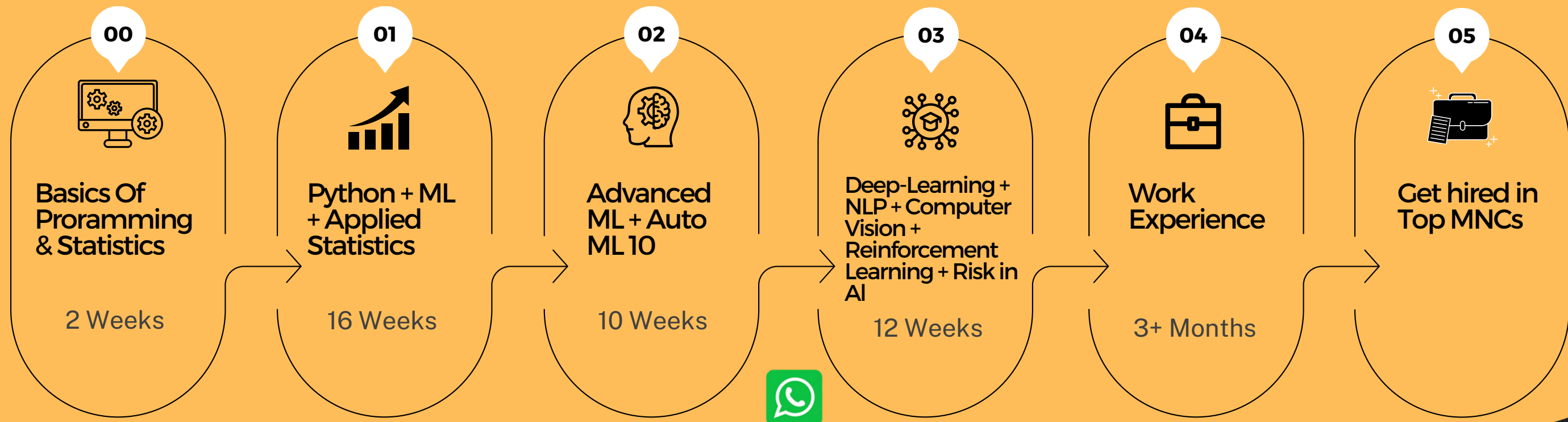## 2
DOMAIN SPECIALISATION

Choose a domain-specific industry of your choice & background. Identify a functional area or target industry to specialise in & work on multiple graded projects. Learn about the application of Data Science in your domain industry to get hands-on experience and gain knowledge from industry experts. Go through our unique domain- specific/ industry training sessions for a smooth transition in data science

3
BRING YOUR OWN PROJECT

Learners have an option to bring their project ideas which can be worked upon by fellow students under our expert's guidance to achieve a certain goal.
Become a Decision Maker to use this opportunity to get a POC done along with a certificate.
BUILD YOUR OWN COURSE
Get a Personalised focus learning track depending on your profile. Get access to the entire course even after completion.

ROADMAP OF DATA SCIENCE

00	01	02	03	04	05
Basics Of Proramming & Statistics	Python + ML + Applied Statistics	Advanced ML + Auto ML 10	Deep-Learning + NLP + Computer Vision + Reinforcement Learning + Risk in AI	Work Experience	Get hired in Top MNCs
2 Weeks	16 Weeks	10 Weeks	12 Weeks	3+ Months	

MODULE 00
Basics Of Data Science

1. Programming Introduction

Source code Vs bytecode Vs machine code, Compiler Vs Interpreter, C/C++, Java Vs Python.

2. Code Editors Basics

Different type of code editors in python, Introduction to Anaconda and IDEs.

3. Python Basics

Different type of code editors in python, Introduction to Anaconda and IDEs.

4. Statistics Basics & Probability

Measures of Central Tendency & dispersion, Inferential statistics and Sampling theory.

MODULE 01
Programming Essentials

1. Programming Introduction

Different types of Programming Language, What is Compiler? What is an Interpreter?

2. Conditional Loops

Conditional Statement, Loop Statement.

3. Python Introduction

How a Python Program runs on our system? Features of Python Memory Management in Python, Different Implementations of Python.

4. Python Programming Components

Linting, formatting, understanding Python code, Command Line Arguments, Python Operators.

MODULE 02
Applied Statistics

1.Probability & Statistical Inferences

Random Variables & Probability principles, Discrete & continuous Probability Distributions, Joint & Conditional Probabilities, Bayes theorem & Central Limit Theorem.

2. Statistics Foundations

Elements of Descriptive & Inferential Statistics, Measures of Central tendency & Dispersion, Sampling theory & scales of measurement, Covariance & correlation.

3. Hypothesis Testing Applications

Formulation of Hypothesis, Choice of Test - t test vs z test, Chi-squared and F tests, Evaluation of Test, Confidence Intervals, Type 1 and 2 errors.

4. Exploratory Data Analysis

Ingest data, Data cleaning, Outlier detection & Missing value imputation, Project - Exploratory analysis on Credit card data.

MODULE 03
Introduction to Machine Learning

1. Primer on Machine Learning

Supervised, Unsupervised & Reinforcement learning, Statistics vs Machine Learning, Types of Analysis, Bias Variance Trade-off, Overfitting vs Underfitting.

2. Regression

Correlation vs Causation, Types of linear regression, OLS Estimation and Gradient descent, Model Evaluation Metrics for regression problems.

3. Time-series Analysis

Intro to Time series. Autocorrelation and ACF/PACF plots, The Random Walk model and Stationarity of Time Series, Tests for Stationarity - ADF and Dickey- Fuller test, AR, MA, ARIMA, SARIMA models, A regression approach to time series forecasting.

4. Machine Learning pipeline & auto ML

Feature engineering & selection techniques, Principal Component Analysis, Linear Discriminant Analysis, Serving the model via Rest API & Keras.

MODULE 04
Deep Learning

1. Neural Networks
Introduction to Neural Networks, Layered Neural Networks, Activation Functions and their Application, Back propagation and Gradient Descent.

2. TensorFlow
Introduction to TensorFlow, Working with TensorFlow, Linear regression & Logistic regression with TensorFlow.

3. Deep Neural Networks
Designing a deep neural network, Loss Function, Tools for deep learning models - Tflearn and Pytorch, The problem of Exploding and Vanishing gradients.

4. Convolutional Neural networks
Architecture & design of a Convolutional network, Deep convolutional models & image augmentation.

5. Recurrent Neural networks & LSTMs.
RNN & LSTM structure, Bidirectional RNNs and Applications on Sequential data, Advanced Time series forecasting using RNNs with LSTMs, LSTMs vs GRUS.

6. Recurrent Neural networks and LSTMs
Intro to RBMs, Autoencoders, Application of RBMs in Collaborative filtering, Autoencoders for Anomaly detection, Capstone Project - Self-driving cars, Facial recognition.

MODULE 05
NLP

1. Language Modeling

Intro to the NLTK library. N-gram Language models: Perplexity & Smoothing, Intro to Hidden Markov models, Viterbi algorithms, MEMMS & CRFS for named entity recognition, Neural Language models, Application of LSTMs to predict next word.

2. Vector Space Models

Explicit and Implicit matrix factorization, Word2vec and Doc2vec models.

3. Sequence to Sequence Task

Introduction to Machine translation, Natural language processing, NLP with machine translation for text analysis, Word Alignment models, Encoder-Decoder Architecture, How to implement a conversational Chatbot.

4. Capstone Project

Fully functional chatbot, Front end, backend and deployment process for chatbot.

MODULE 06
Reinforcement Learning

1. What is RL? - High-level overview.
2. The multi-armed bandit problem and the explore-exploit dilemma.
3. Markov Decision Processes (MDPs).
4. Dynamic Programming, Monte Carlo Control.
5. Temporal Difference (TD) Learning (Q-Learning and SARSA).
6. Approximation Methods (i.e., how to plug in a deep neural network or another differentiable model into your RL algorithm).

MODULE 07
Computer Vision

1. Mathematics for Computer Vision.
2. Introduction to Transfer Learning.
3. R-CNN and RetinaNet models for Object detection using TensorFlow.
4. FCN architecture for Image segmentation.
5. IoU and Dice score for model evaluation.
6. Face detection with OpenCV.

MODULE 08
Explainable AI & Risk Management

1. Ethical Risk Analysis - Identification and Mitigation
2. Managing Privacy risks
3. Modeling personas with minimal private data sharing.
4. Homomorphic encryption and Zero-Knowledge protocols.
5. Managing accountability risks
6. Managing Transparency and Explainability risks

MODULE 09
Big Data (Hadoop + Spark)

1. Introduction

What is Big Data, Benefits of Big Data, Need for Big Data Analytics, Hadoop Overview and History, Hadoop Architecture, Hadoop cluster - Master and Client Nodes, HDFS, Yarn, MapReduce, MapReduce Programming.

2. The Power Of Spark

Understand the big data ecosystem, Understand when to use Spark and when not to use it

3. Data Wrangling With Spark

Manipulate data with SparkSQL and Spark Dataframes, Use Spark for ETL purposes

4. Debugging & Optimisation

Troubleshoot common errors and optimize their code using the Spark WebUI

5. Introduction to Data Lakes

Understand the purpose and evolution of data lakes, Implement data lakes on Amazon S3, EMR, Athena, and Amazon Glue, Use Spark to run ELT processes and analytics on data of diverse sources, structures, and vintages, Understand the components and issues of data lakes

MODULE 10
Deployment (AWS + GCP)

1. AWS Cloud Computing

Introduction to Cloud Computing & AWS, Elastic Compute - EC2, EBS, EFS; Load Balancing, Autoscaling & DNS, Virtual Private Cloud (VPC), Simple Storage Service (S3), Databases and In-Memory Data Stores (RDS, DynamoDB), Application Services, AWS Lambda and CLI, SNS, SQS, Cloudwatch; Athena, Quicksight and Kinesis, AWS Cognitive Services (Rekognition, Comprehend and Polly), Access Management and Monitoring Services, Automation and Configuration, AWS Migration, Data Storage, Data Streaming and Data Analytics on Cloud, Data Visualization and Data Security, Setting up Kinesis Data Stream, Platform as a Service - Elastic Beanstalk Configuration management and automation, Architecting AWS - whitepaper, Setting up a Cloud-based Development Environment, AWS Migration AWS Security, Infrastructure Setup, DevOps on AWS, Deploying Infrastructure with Terraform, Terraform Modules & Workspaces, Deployment Pipeline (AWS Code Commit, AWS Code Deploy, and AWS CodePipeline)

2. Google Cloud Platform

Overview, Regions, Resources, and Services, Google Compute Engine, Instance, Groups, Load Balancing, and Autoscaling, Storage and Networking, GCloud and Cloud SDK, Google App Engine, Google Kubernetes Engine

MODULE 11
Tools

Excel For Business

1. Excel Fundamentals

Introduction to Excel interface, Customizing Excel Quick Access Toolbar, Structure of Excel Workbook, Excel Menus, Working with worksheets, Protecting a Workbook, Hiding and Unhiding Columns, Rows and Sheets, Splitting and Freezing a Window, Inserting Page Breaks, Advanced Printing Options, Common Excel Shortcut Keys, Quiz.

2. Worksheet customisation

Adjusting Page Margins and Orientation, Creating Headers, Footers, and Page Numbers, Adding Print Titles and Gridlines, Formatting Fonts & Values, Adjusting Row Height and Column Width, Working with border and alignment, Applying Colours and Patterns, usage of painter, Formatting data, Merging Cells, Rotating Text, Using Auto Fill.

3. Images & Shapes Into Excel Worksheet

Inserting Excel Shapes, Formatting Excel Shapes, Inserting Images, Working with Excel SmartArt.

4. Basic Work On Excel

Entering and selecting values. Using numeric data in excel. Working with forms menu, cell references, conditional formatting and data validation, Finding and replacing information from worksheet, Inserting & deleting cells, rows and columns.

5. Excel Formula

Creating basic formulae in excel, Implementing excel formula in worksheet, Relative cell referencing, Absolute cell referencing, Relative vs Absolute cell references in formula, Understanding the order of operation, Entering and Editing text, Fixing errors in your formulae, Formulae with several operators, Formulae with cell ranges., Quiz.

6. Excel Functions

Working with functions like SUM(), AVERAGE() etc., Adjacent cells error in excel calculations, Use of AutoSum & autofill command, Quiz.

7. Charts & Graphs

Creating a column chart, pie chart, Working with the excel chart ribbon, Working with and on charts in sheets, Changing a chart's source data, Adding titles, gridlines and a data table, Formatting a data series and chart axis, Using fill effects. Changing a chart type, Quiz.

8. Support Vector Machines

Intro to Pivot Tables, Structuring Source Data for Analysis in Excel, Creating a PivotTable, Exploring Pivot Table Analyse & Design Options, Working with and on pivot tables, Dealing with Growing Source Data, Enriching data with Pivot table calculated values & fields, Formatting and charting a PivotTable, Pivot Table Case Study, Quiz.

9. Basic Macros

Introduction to macros, Automating Tasks with Macros, Recording a Macro, Playing a Macro, Assigning a Macro a Shortcut Key.

SQL & MongoDB for Business

10. Introduction To SQL

Working with MySQL, DDL, TCL, DML commands, Relational and database schema, Working with keys, Database manipulation, management, and administration.

11. No SQL Databases

What is HBase?, HBase Architecture, HBase Components, Storage Model of HBase, HBase vs RDBMS, Introduction to MongoDB, CRUD, Advantages of MongoDB over RDBMS, Use cases.

12. SQL Database

Introduction to database, Creating Database, Dropping Database, Using Database, Introduction to Tables, Data types in SQL, Use case of different data, Working with tables, Coding best practices in SQL.

13. SQL Fundamental Statements

Working with SQL statements like NOT, IN etc., Comparison Operators (=, >, >=, <=), MySQL Warnings (Understand and Debug).

14. Refining Selection

Introduction to visualisation using charts and graphs, SELECT DISTINCT, LIKE, NOT LIKE, ILIKE, LIMIT, BETWEEN, BETWEEN - AND.

15. OOL

Multiple INSERT, INSERT INTO. GROUP BY, HAVING, WHERE vs HAVING, UPDATE, DELETE, AS, EXISTS-NOT EXISTS, Application of group by, Count function, MIN and MAX, Sum Function, Avg Function

16. Joins & String Function

Introduction to JOINS, Types of JOINS, Usage of different types of JOINS, Loading Data, Usage of string functions like; CONCAT, SUBSTRING etc., INNER Join, OUTER Join, Full Join, Left Join, Right Join, UNION.

17. Advanced SQL

Local, Session, Global Variables, Timestamps and Extract, CURRENT DATE & TIME, EXTRACT, AGE, TO_CHAR, Mathematical Functions and Operators, CEIL & FLOOR, POWER, RANDOM, ROUND, SETSEED, Operators and their precedence.

18. Basics & CRUD Operation

Databases, Collection & Documents, Shell & MongoDB drivers, What is JSON Data, Create, Read, Update, Delete, Working with Arrays, Understanding Schemas and Relations.

19. MongoDB

What is MongoDB? Characteristics, Structure and Features, MongoDB Ecosystem. Installation process, Connecting to MongoDB database, What are Object Ids in MongoDb, Data Formats in MongoDB, MongoDB Aggregation Framework, Aggregating Documents, What are MongoDB Drivers?, Finding, Deleting, Updating, Inserting Elements.

TABLEAU for Business

20. Introduction to TABLEAU

Usage of TABLEAU, Exporting worksheets, charts in TABLEAU (bar, pie, histogram), Creating dashboard pages and tricks, Hands on exercise

21. Data Types In TABLEAU

Aggregation and Granularity, Pre-attentive processing, Length and position, Implementation, Advance table calculations, Creating multiple joins in Tableau, Relationships vs Joins, Calculated Fields vs Table calculations, Creating advanced table calculations, Adding a second layer moving average, Trendlines for power- insights.

22. Mapping & Analytics

Getting started with visual analytics, Geospatial data, Mapping workspace, Creating a map, working with hierarchies, Custom geocoding, WMS and Background, Image Creating a Scatter Plot.

23. Calculations

Aggregation and its types, level of detail, common calculation functions, creating parameters.

24. Dashboard & Stories

Tiled vs Floating, Working in views with Dashboard and stories, Legends, Quick filters.

Power BI for Business

25. Introduction To Power BI

Account Types, Installing PowerBI, Data Model, Query Editor.

26. Query Editor

Connecting power BI desktop to datasource, working with column, filters & rows, Query duplicate vs References

27. Power BI

The goal is to study the pattern of COVID-19 cases in different regions in India using Google mobility data to study the impact of policy changes.

28. Data Models

Relationships, DAX, M-Language, Measures, Operators & Syntax, Understanding "Data category"

29. Time Intelligence

Create data table in M and DAX, Display last refresh Date.

30. Modelling

Create report, modelling, Normalization, De-normalisation, OLTP vs OLAP, star and snowflake schema

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REAL TIME PROJECTS

1

Telecom customer churn prediction

Domain: Telecom
Project Objective: Predict the behavior of customers to identify the probability of churn.

The telecom company wants to predict the customer's behavior to predict and retain the customer before churning off. You will have to predict the group of people who are highly probable of churning off.

2

Uber - fare prediction

Domain: Travel
Project Objective: Predicting fare price based on demand & supply, weather & other factors.

You will have to analyse the data of the ride sharing applications to identify the factors that are driving the demand. Use weather data to study the pattern and create a model to predict the accurate fare for the ride.

3

Mercedes-Benz - Reduce time to market
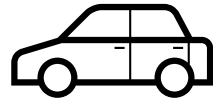
Domain: Automobile
Project Objective: Reduce the time for a Mercedes-Benz to reach the market by optimizing the testing time.

The company is unable to reduce the time spent on the test bench. Elimination of bench time would reduce the total testing duration.

4

Spotify - Identify the songs related to

Domain: Media & Entertainment.
Project Objective: Find a Geographical connection with popular songs.

You will work on the dataset with 10 million records that will contain the data from 70 countries. Analyze and identify the geographical connection with the popular songs.

5

Predict bankruptcy of a company

Domain: Corporate Finance
Project Objective: Model to predict whether a company will go bankrupt or not

Company bankruptcy is defined based on the business regulations in the country. You will work on detailed data with 95 attributes collected to predict whether a company may go bankrupt or not.

6
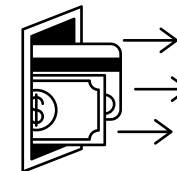
TAU - Vehicle type recognition from image

Domain: Image Recognition (Road)
Project Objective: Determine the vehicle type.

You are going to train a model with training data such that it predicts a new image of the vehicle accurately.

7

Predict credit default

Domain: Banking
Project Objective: Develop a prediction model for identifying probable credit default for a retail bank

The bank has a huge dataset of credit card customers. It wants you to identify the existing customers who may default on the payments in the future.

8

Amazon Food Reviews

Domain: Marketing
Project Objective: Classify food reviews based on customer feedback

You will perform sentiment analysis on each product on the list. Here you will use NLP to identify the sentiment of customers.

9. Reddit - Vaccine myths on social media

Domain: Healthcare
Project Objective: Sentiment analysis of Vaccine on social media

There are a lot of myths and sentiments rolling on social media with respect to Vaccination in the country. You will identify the sentiment of people on Reddit and identify the myths circulating on the media channel.

10. Machine Translation
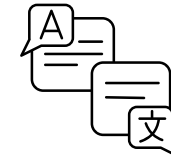
Domain: Media
Project Objective: Perform text translation, text parsing and summary of the books

This dataset can be used for tasks like Machine Translation, Text Generation, Text Parsing and Semantic Understanding of Natural Language

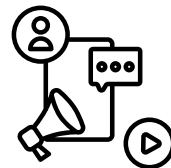## 11. Google Mobility data - Impact of mobility on COVID-19

Domain: Healthcare
Project Objective: Identification of COVID-19 surge in cases based on mobility within the country

The goal is to study the pattern of COVID-19 cases in different regions in India using Google mobility data to study the impact of policy changes.
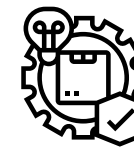
12. Olist store - Marketing Funnel

Domain: Sales and Marketing
Project Objective: Predict the deals that will be closed.

The list generates data from lead generation to the closure of the lead as a customer.

13. Heavy Machine predictive maintenance

Domain: Manufacturing
Project Objective: The objective is to predict the failure of the machine in advance

A predictive maintenance technique is developed to help anticipate equipment failures and allow for advanced scheduling of corrective maintenance. You will predict which day is a failure day in advance based on the features.

14. Customer satisfaction on delivery system

Domain: E-Commerce Delivery
Project Objective: Predict the satisfaction level of customers

There are different factors that are involved in e-commerce product delivery. This analysis will predict the factors that are affecting the satisfaction level of customers on the delivery.

15. Predict heart failure

Domain: Healthcare
Project Objective: Predict mortality caused by heart failure

Cardiovascular diseases (CVDs) are the number 1 cause of death globally & heart failure is the most common event caused. Your task will be to create model that could predict heart failure before its occurrence that could help the society.

16. YouTube trending video analytics

Domain: Social Media
Project Objective: YouTube trending video analytics video analytics

This is a daily record of data on videos trending on YouTube. You are required to analyze the data to predict the sentiment of the videos, study the comments by categorizing the videos and analyze the factors that affect the popularity of the video.

17. Google Play Store Apps success factors

Domain: App Store
Project Objective: Predict the factors that contribute to the success of an application on Google play store

This dataset comprises information from Google play store. Your task will be to draw actionable insights for developers to work on and capture the Android market segment.

18. Infected or not Infected

Domain: Healthcare
Project Objective: Study the human cell to identify whether it is infected or not infected

You will study the repository of images. and shall recognize on the new samples that it is infected or not infected.

19. VinBigData Chest X-ray Abnormalities Detection

Domain: Healthcare
Project Objective: Accurately identify & localize findings on chest radiographs

Radiologists face many daily challenges, with the most difficult being the chest radiograph. The task is to provide doctors with more meaningful diagnostic assistance. This is an object detection and classification problem based project.

20. Detection of Road Lane Lines

Domain: Automobiles
Project Objective: Development of self-driving cars

A driver receives lane detecting signals from lines placed on the road in this project.

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