



Start Date : 16 June 2025

LIVE Session Time : (Mon-Fri) 6:00PM IST

Session Duration : 2 Hours

Batch Duration : 2-3 Months

Content Access : 2 Years

★ Key Features ★

- Beginner Friendly
- Basics to Advanced
- LIVE Sessions (Theory + Practical)
- Session Recordings
- Certification
- 25+ Modules
- 30+ Projects
- 50+ Live Sessions
- 500+ Interview Questions

Syllabus

✓ Python

- Installation
- Variables
- Data Types
- Numbers
- Strings
- Operators
 - Arithmetic Operators
 - Assignment Operators
 - Comparison Operators
 - Logical Operators
- List

- Basic Properties
- Create
- Access
- Add
- Remove
- Sort
- Join
- Copy
- Reverse
- Tuples
 - Basic Properties
 - Create
 - Access
 - Add
 - Remove
 - Join
 - Count
- Sets
 - Basic Properties
 - Create
 - Access
 - Add
 - Remove
 - Join
 - Copy
 - Difference
 - Intersection
 - Union
- Dictionary
 - Basic Properties
 - Create
 - Access
 - Add
 - Remove
 - Update
 - Clear
 - Copy
 - Keys
 - Values
- If...Else
- Elif
- Nested If...else
- Loops
 - For loop
 - Nested For loop
 - While loop
 - Nested while loop
 - Range
- Break statement
- Continue statement
- Functions
- Arrays
 - Basics
 - Representation
 - Create
 - Access
 - Traversal
 - Insert
 - Delete
 - Sort
 - Search
 - Reverse

- Multi Dimensional Array
- Class
- File Handling
- Exception Handling

Data Visualization with Python

- Matplotlib
 - Introduction
 - Pyplot
 - Plotting
 - Markers
 - Line
 - Grid
 - Subplot
 - Scatter
 - Bars
 - Histogram
 - Pie Chart
- Seaborn
 - Introduction
 - Plotting
 - Grid
 - Scatter plot
 - Line plot
 - Bar plot
 - Count plot
 - Box plot
 - Violin plot
 - KDE plot
 - Pairplot
 - Heatmap

Streamlit

- Installation and Setup
- Text Elements
 - Title
 - Header
 - Subheader
 - Markdown
 - Caption
 - Text
- Data Elements
 - Data Frame
 - Data Editor
 - Table
 - Metric
- Chat Elements
 - Chat Input
 - Chat Message
 - Status
- Chart Elements
 - Area Chart
 - Bar Chart
 - Line Chart
 - Map
 - Scatter Chart
- Input Widgets

- **Button**
- **Download Button**
- **Feedback**
- **Link Button**
- **Page Link**
- **Checkbox**
- **Color Picker**
- **Multi Select**
- **Radio**
- **Select Box**
- **Select Slider**
- **Toggle**
- **Number Input**
- **Slider**
- **Text Area**
- **Text Input**
- **Date Input**
- **Time Input**
- **Media Elements**
 - **Audio**
 - **Image**
 - **Video**
- **Deploy an App**
- **Project (Streamlit + Python)**

Statistics and Probability

- **Population**
- **Sample**
- **Measure of Central Tendency**
 - **Mean**
 - **Median**
 - **Mode**
- **Variance**
- **Standard Deviation**
- **Range**
- **Percentiles**
- **Quartiles**
- **Skewness**
- **Min**
- **Max**
- **Kurtosis**
- **Gaussian Distribution**
- **Central Limit Theorem**
- **Hypothesis Testing**
- **Covariance**
- **Bayes Theorem**
- **Entropy**
- **Gini Index**

Linear Algebra

- **Vectors**
- **Matrices**
- **Transpose**
- **Inverse of a Matrix**
- **Determinant**
- **Dot Product**
- **Eigen Values**

- Eigen Vectors

Machine Learning

- Installation and Setup Configurations
- Loading Data
- Understanding Data
- Understanding DataFrame
- Training and Testing Data
- Preprocessing
 - MinMax Scaler
 - Standard Scaler
 - Robust Scaler
 - Binarizer
 - Normalizer
 - Label Encoding
 - One Hot Encoding
- Generated Datasets
 - make regression
 - make classification
 - make blobs
 - make circles
 - make moons
- Cross Validation
 - Holdout Method
 - K-Fold Cross Validation
 - Stratified Cross Validation
 - Leave P-Out
 - Leave One Out
- Univariate Analysis
- Bivariate Analysis
- Multivariate Analysis
- Simple Linear Regression
- Multiple Linear Regression
- Logistic Regression
- Multinomial Logistic Regression
- Ridge Regression
- Lasso Regression
- ElasticNet Regression
- Robust Regression
- Polynomial Regression
- Decision Tree Regression
- Support Vector Regression
- KNN Regression
- Decision Tree Classification
- KNN Classification
- Support Vector Machine
 - Linear Kernel
 - RBF Kernel
 - Polynomial Kernel
- Naive Bayes
 - GaussianNB
 - MultinomialNB
 - BernoulliNB
- K Means Clustering
- Hierarchical clustering
- Dendrogram
- Ensemble Methods
 - Gradient Boosting Classification
 - Random Forest Classification
 - Random Forest Regression
 - Bagging Classification

- Ada Boost Classification
- Voting Classifier
- Voting Regressor
- Outliers Detection
 - DBSCAN
 - Isolation Forest
 - Elliptic Envelope
 - Local Outlier Factor
- Confusion Matrix
- Errors
- Score
- Accuracy
- Precision
- Recall
- Mean absolute error (MAE)
- Mean squared error (MSE)
- Root mean square error (RMSE)
- Hyperparameter Tuning
 - Manual Search
 - Grid Search
 - Randomized Search
- Feature Selection
 - Mutual_Info_Classif
 - Correlation Matrix
 - SelectKBest
 - Variance Threshold
- ROC Curve
- Bias-Variance tradeoff
- Principal Component Analysis (PCA)
- Pipelining
- Joblib
- Pickle
- Deployment using Flask
- Deployment using FastAPI
- **Machine Learning Projects**

Time Series

- Upward Trend
- Downward Trend
- Stationary Data
- Cyclic Data
- Pandas data reader
- Datetime
- Indexing
- Visualization
- Forecasting
- Rolling
- Augmented Dickey-Fuller Test
- Simple Moving Average
- Cumulative Moving Average
- Autocorrelation Function (ACF)
- Partial Autocorrelation Function (PACF)
- ARIMAX
- SARIMAX
- **Time Series Project**

Deep Learning

- Neurons
- Neural Network
- Input Layer
- Hidden Layer

- Output Layer
- Weights
- Bias
- Batchs
- Epochs
- Iterations
- Learning Rate
- Multi Layer Perceptron
- Gradient Descent
- Activation Functions
 - Sigmoid Activation Function
 - Tanh Activation Function
 - ReLU Activation Function
 - Leaky ReLU Activation Function
 - Softmax Activation Function
- Forward Propagation
- Backward Propagation
- Chain Rule
- Vanishing Gradient Problem
- Exploding Gradient Problem
- Optimizers
 - Adadelta
 - Adagrad
 - Adam
 - RMSProp
 - SGD
- Dropout Layers
- Data Augmentation
- Flattening
- Max Pooling
- Kernels
- ANN
- CNN
- RNN
- LSTM
- GAN
- Model Deployment
- **Deep Learning Projects**

Natural Language Processing

- Corpus
- Documents
- Vocabulary
- Words
- Vectors
- Regular Expression
- Tokens
 - Word Tokens
 - Sentence Tokens
- Tokenization
- Stemming
- Lemmatization
- POS Tagging
- Named Entity Recognition
- StopWords
- Bag of Words
- TF-IDF
- Word2Vec
- Model Deployment
- **Natural Language Processing Projects**

LangChain

- Installation and Setup
- Prompts
- Simple Sequential Chain
- Sequential Chain
- Conversation Chain
- Chat Models
- Pydantic Output Parser
- Comma Separated List Output Parser
- Datetime Output Parser
- Text File Loader
- CSV Loader
- PDF Loaders
- Recursive Character Text Splitter
- Character Text Splitter
- Token Text Splitter
- Text Embedding
- Agents
- Conversation Buffer Memory
- Conversation Buffer Window Memory
- Conversation Entity Memory
- Conversation Knowledge Graph Memory
- Conversation Summary Memory
- Conversation Summary Buffer Memory
- Conversation Token Buffer Memory
- **LangChain Project**

Transformers

- Introduction
- Complete History
- Architecture
- Attention Is All You Need
- Encoder
- Input Embeddings
- Self Attention Mechanism
- Transformer Block
- Positional Encoding
- Output Layer
- Decoder
- Advantages Of Transformers
- Disadvantages Of Transformers

VectorDB

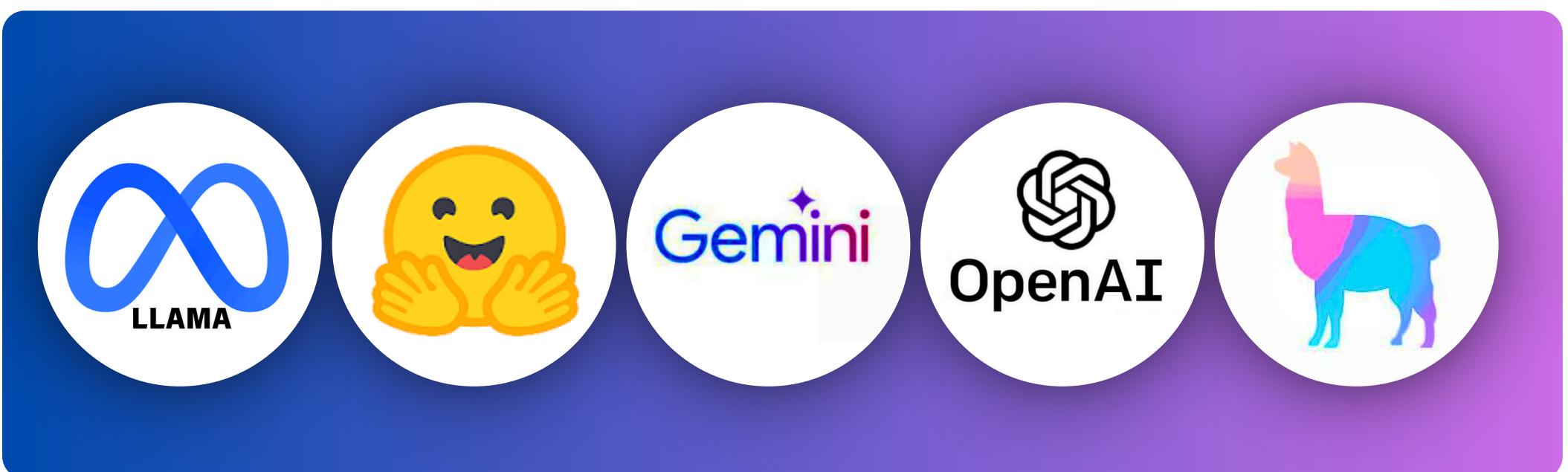
- Introduction
- Need of VectorDB
- RDBMS Vs VectorDB
- Vector Embeddings
- Embedding Model
- Working
- ChromaDB
- **Project (LangChain + ChromaDB)**

Prompt Engineering

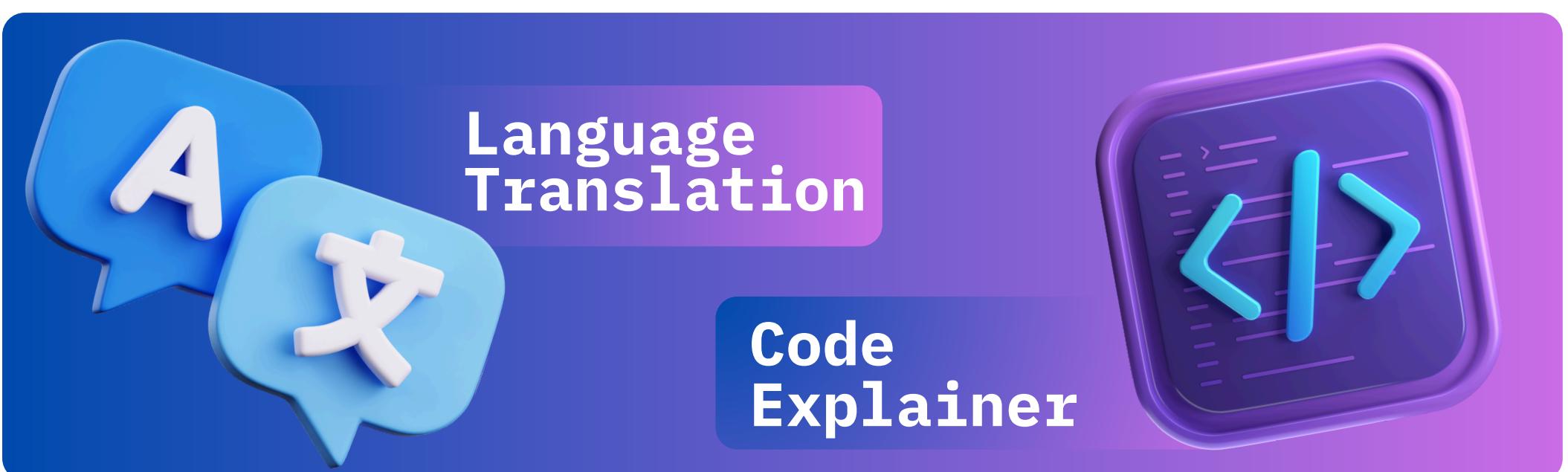
- Introduction
- PE Elements
- Designing Effective Prompts
- Zero-Shot Learning
- One-Shot Learning
- Few-Shot Learning
- Chain-of-Thought Prompting

- Prompt Chaining
- Retrieval Augmented Generation (RAG)
- Implementing Popular Use Cases

Large Language Model (LLM)



• Projects



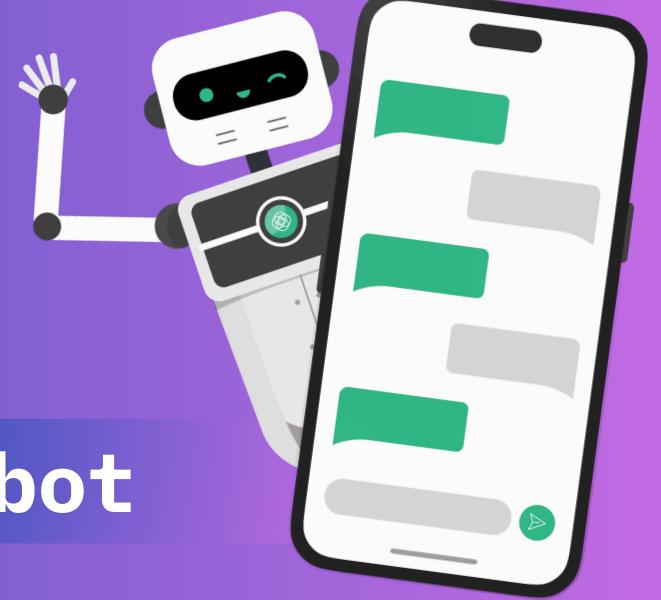


Youtube Video
Summarizer

Spam_Detection



Code
Generator



Chatbot



Sentence
Completion



Question
Answering

Excel

- Basic:
 - Sum
 - Average
 - Product
 - Mean
 - Median
 - If
 - SumIf
- Advanced:
 - Match
 - VLOOKUP
 - Pivot Tables
 - Index
 - Filter
 - Sorting

SQL

- Mysql workbench
- Queries
 - SELECT
 - WHERE
 - CREATE DATABASE
 - CREATE TABLE
 - INSERT
 - UPDATE
 - ALTER
 - DROP
 - NOT
 - DISTINCT
 - LIKE
 - BETWEEN
 - IN
 - ORDER BY
 - LIMIT
 - OFFSET
 - COUNT
 - UNION
 - CHECK
 - DEFAULT
 - GROUP BY
 - HAVING Clause
 - IF and CASE
- Functions
 - AVG()
 - MIN()
 - MAX()
 - SUM()
 - ABS()
 - ROUND()
 - CONCAT()
 - GROUP_CONCAT()
- Joins
 - INNER JOIN
 - NATURAL JOIN
 - LEFT JOIN
 - RIGHT JOIN
 - FULL JOIN
 - CROSS JOIN
 - SELF JOIN
- Subquery
- Co-Related Subquery
- Aliases
- ANY Operator
- ALL Operator
- Entity Relationship Diagram
- Primary Key
- Foreign Key
- Common Table Expression
- Stored Procedures
- Triggers
- View
- Temporary Table

PowerBI

- PowerBI Installation
- Interface Tour
- Data Import

- Data Export
- Custom Table
- Report View
- Data View
- Model View
- Choose Column
- Remove Column
- Keep Row
- Remove Row
- Group By Implementation
- Merge
- Append
- Visualization
 - Stacked Bar Chart
 - Clustered Bar Chart
 - 100% Stacked Bar Chart
 - Stacked Column Chart
 - Clustered Column Chart
 - 100% Stacked Column Chart
 - Line Chart
 - Area Chart
 - Stacked Area Chart
 - Line and Stacked Column Chart
 - Line and Clustered Column Chart
 - Funnel Chart
 - Scatter Plot
 - Pie Chart
 - Donut Chart
 - Map
 - Tree Map
 - Filled Map
 - Gauge Chart
 - Cards
 - Slicers
 - Matrix
 - Table
 - Ribbon Chart
- Data Analysis Expressions (DAX)
- Power Query Editor
- Measures
- Types Of Relationships
- Calculated Columns
- Calculate Table

Tableau

- Tableau Public
- Interface Tour
- Connecting to Data
- Data Export
- Data Pane
- Worksheet
- Dashboard
- Data Interpreter
- Data Pivoting
- Data Splitting
- Joins
- Union
- Visualization
 - Bar Chart
 - Side by side Bar Chart
 - Pareto Chart

- Text Chart
- Waterfall Chart
- Gantt Chart
- Line Chart
- Bullet Chart
- Area Chart
- Heat Map
- Pie Chart
- Bubble Chart
- Histogram
- Highlight Table
- Scatter Plot
- Map Chart
- Tree Map Chart

- Filters
- Bins
- Data Labels
- Axis Range
- Dimension Fields
- Measure Fields
- Calculated Fields
- LOD Expressions
- Tableau Functions
- Tableau Actions

Google Looker Studio

- Interface Tour
- GLS Features
- Data Sources
- Data Export
- Connectors
- Report
- Dashboard
- Dimensions
- Metrics
- Visualization
 - Bar Chart
 - Stacked Bar Chart
 - 100% Stacked Bar Chart
 - Column Chart
 - Stacked Column Chart
 - 100% Stacked Column Chart
 - Table
 - Pivot Table
 - Time Series Chart
 - Pie Chart
 - Donut Chart
 - Combo Chart
 - Geo Chart
 - Bubbled Map
 - Heat Map
 - Filled Map
 - Line Map
 - Area Chart
 - Scatter Chart
 - Bullet Chart
 - Gauge Chart
 - Tree Map
- Data Range
- Filters
- Layout

- Styling
- Adding Pages
- Calculated Fields

Git and GitHub

- Git Vs GitHub
- Git Installation
- Git Terminologies
- Creating Account On GitHub
- Creating Your First Repository
- Git Init
- Add and Commit
- Git Branches
- Git Conflicts
- Git Diff
- Git Stash
- Git Tags
- Git Rebase
- Git Reflog
- Git Status
- Git Reset
- Git Behind The Scene
- Push Command
- Pull Command
- **Building CI/CD Pipeline**

NoSQL

- Introduction to NoSQL
- MongoDB Installation
- MongoDB Compass
- Basic MongoDB Terminologies
- Basic MongoDB Commands
- Create
- Read
- Update
- Delete
- Sort
- Skip
- Limit
- DataTypes in MongoDB
- Operators in MongoDB
- IF-ELSE in MongoDB
- Variables in MongoDB
- Data Modeling in MongoDB
- Indexes in MongoDB

Azure

- Introduction to Azure
- Creating Free Azure Account
- Resource Group
- Basics of Azure Data Factory
- Basics of Azure Data Lake
- Basics of Azure Synapse Analytics
- Creating Storage Account
- Create Azure Data Factory Workspace
- Creating Containers
- Linked Service in ADF
- Basic Activities in ADF
- Expression Builder

- Data Ingestion in Data Lake
- Data Flow in ADF
- Data Transformation
- Triggers
- Executing SQL Queries
- **End-To-End Data Pipeline Project Using ADF**

Apache Spark with DataBricks (PySpark)

- Introduction To Apache Spark
- Apache Spark Architecture
- Apache Spark Terminologies
- PySpark Installation
- Creating DataBricks Free Account
- DataBricks Basics
- DataBricks Notebook
- Schema
- Spark Cluster
- Data Ingestion
- Data Reading with Pyspark
- Spark DAG
- Normalization
- Standardization
- Encoding Categorical Data
- Select
- Alias
- Filter
- Sort
- Drop
- Limit
- Union
- Date
- Handling Missing Values
- Indexing
- Splitting
- GroupBy
- Joins
- Window Functions
- User Defined Functions
- Data Writing
- DataBases and Tables
- PySpark SQL

Data Warehouse with Snowflake

- Introduction To Data Warehouse
- Database Vs Data Warehouse
- Data Warehouse Architecture
- Online Transaction Processing (OLTP)
- Online Analytical Processing (OLAP)
- Dimensions
- Fact Table
- Schema
- Introduction To Snowflake
- Creating FREE Account
- Setting Up Warehouse
- Loading Data
- Transforming Data
- SnowPipe
- Time Travel
- Streams
- Stored Procedure

Apache Airflow

- Introduction To Airflow
- Installation and SetUp
- Basic Interface Tour
- Directed Acyclic Graph (DAG)
- DAG Run Status
- Task
- Task Dependencies
- Task Instances
- Params
- Operators
- Sensors
- Executors
- Schedule
- **Building ETL Pipeline From Scratch**

Interview Questions

- 500+ Interview Questions

Book Your Seat Now : <https://www.5minutesengineering.com>

In case of any query/doubt/difficulty regarding this batch, directly message me on whatsapp **8329917036**

Or mail me at 5minutesengineering@gmail.com



PREVIOUS LIVE BATCH STUDENTS FEEDBACK

- “ I have been living in Qatar for 11 years, and I consider myself fortunate to have had the opportunity to study Generative AI and Data science from Shridhar sir in such a simple way. Last year, I went to the USA to pursue AI and machine learning course at the prestigious MIT College in Boston. Although I was thrilled, I was also nervous because I knew nothing about the course. I found Shridhar Sir's videos on AI and machine learning on YouTube. I immediately gained confidence after seeing them. I actively participated in the MIT course and successfully completed it. I have not come across a teacher who is so persistent and uses such simple teaching methods. I still have a lot of advanced topics to study, from Sir. I pray that Sir has a long life, and may his educational revolution be a huge success. Thank you Sirji !”
— Smita Sevalkar ”
- “ Yess it was a amazing experience to learn from basic to advanced in data science . Tremendous experience to attend the live classes and have your guidance thank you sir for that batch ”
— Prathamesh Dilip Deshpande ”
- “ The Data Science class was very informative and well-structured. The course content was relevant, and the instructor's knowledge was exceptional. Concepts were explained clearly, making it easy to follow along. The materials provided were useful and complemented the lessons well. Overall, it was a great learning experience, and I feel more confident in my understanding of data science ”
— Rohit Pawar ”
- “ My overall experience has been awesome , sir covers all the things in his batches and he completes it on time with all the things he said . He solves everyone doubts in the live classes and the classes are interactive which makes the classes fun and learning and enjoyable . At first you will think that what sir is teaching is impossible to learn and grasp , but I recommend everyone to believe in sir and do what he says , regular practice will result in memorization of syntax. Overall the course was awesome. I would be likely engaged if sir ever starts a DSA batch.”
— Akshat Jain ”
- “ Hello sir.. I have been following your youtube channel for quite a while.. i learned engineering mathematics there and topics like continuity. I finally wanted to learn Data Science so i thought who better than Sridhar Sir. Therefore i joined your Data Science batch, i got a bit late but then i caught up with the live sessions within a week.. Sir to my surprise u have cleared all the maths basics regarding Data Science and also taught some of very tough concepts in a very easy manner with the examples and stories i will remember 😊. Sir my expectations were the same as i saw ur videos and got my concepts cleared, similarly my data science concepts are clear.. looking forward for the practice from the beginning and then the jobs as well in future. All this is possible because of u sir. It was like a dream for me to be called as a Data Scientist as i am from a BA background. Prepared for UPSC for a long time so my 12th maths was also not that clear but thanks to u sir aapne itna easy way me padha diya. Looking forward for the Gen-AI batch as i want to learn from the best only.. 😊 ”
— Devki Nandan Singh ”
- “ The way you are helping people to grow is commendable...We could see the efforts you were making each day to complete the course in time with quality Daily life Examples were the heart of learning from you ... Mummy ke dabbe... ghar se nikal diya .. A new perspective to understand things easily... nice ...Thank You Sir..!! ”
— Jaswant Kaur ”
- “ It was great experience to learn complex topics in the enjoyable and fun way. The explanation of each and every topic was very good. Thank you sir for making understanding of complex topics in simple words.”
— Pravin Gaikwad ”

“

“Initially I was very skeptical about this course due to fee structure(which is very affordable compared to others) & duration of this course by considering vast syllabus(within 1 month of time period).

Then i read few feedbacks on YouTube & just enrolled...

Expectation from this course was to upgrade the skillsets, short in duration (as i am working professional & couldn't afford longer duration) & to gain fundamental knowledge

Happy that all my requirements got fulfilled...

This course has been beneficial for upgrading my skillset. The content was covering all the essential topics from GenAI. Especially the teaching style & real-world examples which is making this complex concepts to grasp easily. Live projects explained during course, were allowing/helping me to apply in real-world examples. Mentor's clear explanations and willingness to engage with students further enhanced the learning experience.

I highly recommend it to anyone looking to upgrade their knowledge in this field and who is willing to fundamentally understand the thing.”

— Vishu

”

“

“Bahot he ache sessions the, saare doubts and content sir ne bahot achese solve and explain kiya.. hume acha idea aagya ke ye sab libraries aur tools ka istemaal kese krna hai and ek level of understanding to learning more and deep dive marne ke liye aur v hope sir ese he aur v courses laate rhe, aur hum dhansu data scientist bante rhe 😊 thank you sir!! keep it up! 4.9/5”

— Raj Shekhar

”

“

“My experience in the GenA.I batch is very memorable.

Sir explained every topic detailed and with appropriate and easy to understand Examples .

Also sir provided some extra guidance and suitable and accurate answer of each doubt, weather it is related to course or out of the topic .

Thank you”

— Jay Prajapati

”

“

“It was great experience. Easy to learn and understand. Best part is the example which make things easy to understand. Lastly I learnt more than my expectations with this price,it's just he is doing favour to people and making them learn. I consider him as my mentor. Thanks for teaching.”

— Divyansh Shivhare

”

“

“Firstly thank you for offering a course on Generative AI Sir. 🙏 The fact that the classes were fully practical made them so much interesting. The examples you gave to explain the concepts are blueprinted on my mind. I have already recommended your channel and the courses to my friends so they can benefit from it too. Only Gratitude 🙏😊 thank you again.”

— Vidyashree Rayar

”

“

“The course studied was excellent , the concepts were clear and way of teaching of sir, is excellent. he is true teacher and i look upto him. I wish sir grows in his career , he is doing real service by techings. thanks sir ”

— Shahbaz Ali

”

“

“Great learning experiencei like the way to explain the topic with simple real life examples”

— Akshay Gadhe

”

“

“In this batch we had great experience and learned everything about data science . sir teach us in very professional and friendly way I'm very thankful to sir ”

— Hamza Mahmood

”