- 1. Python
- 2. Stats
- 3. Machine learning
- 4. Deep learning
- 5. Computer vision
- 6. Natural language processing
- 7. Data analytics
- 8. Big data
- 9. MI ops
- 10. Cloud
- 11. Real Time projects
- 12. Architecture
- 13. Domain wise project
- 14. Databases
- 15. Negotiations skills
- 16. Mock interview
- 17. Interview preparation
- 18. Resume building after every module

## **Python Fundamentals**

Python Basic
String, List, Indexing
Tuple, Set & Dict
If, Else & For Loop
For Loops & While loops
Python Program Discussion in loops
Function Part - 1
Function Part - 2

## **Advanced Python**

Iterator Generator & File System
Exception handling Class 1 part 1
Exception handling Class 1 part 2
Exception handling Class 2
Module & Packages
OOPS Part 1
OOPS Part 2
OOPS Concepts - Polymorphism

## **Working with Databases & Python**

SQL Part 1
SQL Part 2
OOPS Discussion
Introduction to MongoDB
Working with Python & MongoDB Part1
Working with Python & MongoDB Part2
SQLite, map, reduce, filter,zip

## **Working with Pandas & Numpy**

Introduction to Pandas
Working with Pandas
Pandas Data Analysis Part 1
Pandas Data Analysis Part 2
Pandas and Numpy
Numpy methods

## **Working with Graphs & Charts**

Introduction to Graphs & Charts Working with Graphs in Python

#### API

**API Testing** 

#### **Python Projects**

Flask End to End Project Review Scrapper Image Scrapper and deployment on Heroku, AWS and Azure

#### **Statistics**

Introduction to Stats - Day 1 Stats - Day 2 Extra doubt session Stats - Day 3 Stats - Day 4 Stats - Day 5

#### **EDA & Feature Engineering**

Introduction to EDA

Doubt Clearing session

EDA and Feature Engineering

#### **Machine Learning**

**Linear Regression** 

Ridge Lasso Regression, Elastic & Logistic Regression

Naive Bayes Algorithm and practical implementation of Rigde Lasso and Logistic Regression

**Logistic Practical, SSVM, SVR** 

**Decision Tree Classification** 

**Random Forest & SVM** 

Adaboost

**Gradient Boosting** 

Clustering

**Introduction to Machine learning** 

**Linear Regression** 

Linear Regression live coding demonstration part-1

Linear Regression live coding demonstration part-2

Project Admission Prediction, Lasso, Ridge & Elastic Net

Project deployment in Heroku, Azure & AWS

**Logistic Regression** 

**Logistic Regression implementation** 

**Decision Tree** 

Decision Tree Part 2, Ensemble Tech, Random Forest & Boosting

KNN and SVM

**Decision Tree Practical Implementation** 

**Decision Tree Live Coding & Grid Search** 

**Grid Search, Bagging Classifier & Random Forest** 

KNN, SVC, SVR & Stacking

Clustering

**Clustering and PCA** 

PCA practical, DBSCAN and Naive Bayes

XG Boost, NLTK & TF-IDF

## **Machine Learning End to End Project**

**Machine learning project** 

**Machine learning project** 

**ML End to End project Pipeline Explaination** 

ML Project Explaination along with GitHub and Docker

Machine Learning Pipelines Live Coding Part-1
Machine Learning Pipelines Live Coding Part-2
2nd July Live Class
Machine Learning Pipelines Live Coding Part-2
Revision Class
Model training, evaluation and push
Model training, evaluation and push
Revision

#### **PCA** in ML

PCA Implementation

## **NLP for Machine Learning**

NLP in ML Spam Classification

# **Time Series Analysis**

Introduction to Time Series
Time Series Implementation

#### **Stats**

Introduction
Different types of Statistics
Population vs Sample
Mean, Median and Mode
Variance, Standard Deviation
Sample Variance why n-1
Standard Deviation
Variables
Random Variables
Percentiles & quartiles
5 number summary
Histograms
Gaussian - Normal distribution
Standard Normal distribution
Application Of Zscore

**Basics Of Probability** 

Addition Rule In Probability

Multiplication rule in probability

Permutation

Combination

**Log Normal Distribution** 

**Central Limit theorem** 

Statistics - Left Skewed And Right Skewed Distribution And Relation With Mean, Median And

Mode

Covariance

**Pearson And Spearman Rank Correlation** 

What is P Value

What is Confidence Intervals

How To Perform Hypothesis Testing - Confidence IntervalZ Test Statistics Derive Conclusion

Hypothesis testing part 2

**Hypothesis testing part 3** 

**Finalizing statistics** 

## **ML Projects**

**Detailed Project Report explanation** 

**Project :- Wafer Fault Detection Part 1** 

**Project :- Wafer Fault Detection Part 2** 

Deployment in Heroku using docker and circleci

#### ML Project 1:- Fault detection in wafers based on sensor data

Introduction

The problem statement and Data Description

The Application Flow

**Ingestion and Validation Part1** 

**Validation Part2** 

**DB Operations** 

**Data Preprocessing** 

Clustering

**Model Selection and Tuning** 

Prediction

**Deployment** 

#### **ML Project 2 :- Cement Strength Prediction**

Introduction

The Problem Statement and Data Description

The Application Flow
Code Intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Clustering
Model Selection and Tuning
Prediction
Deployment

## **ML Project 3:- Credit Card Defaulters**

Introduction
The Problem Statement and Data Description
The Application Flow
Code intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Deployment

## **ML Project 4:- Forest Cover**

Introduction
The Problem Statement and Data Description
Application Flow
Code intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Clustering
Model Selection and Tuning
Prediction
Deployment

## **ML Project 5 :- Income Prediction**

Introduction
The Problem Statement and Data Description
The Application Flow
Code intro and Logging
Validation and Transformation
DB Operations

Data Preprocessing
Clustering
Model Selection and Tuning
Prediction
Deployment

## **ML Project 6 :- Insurance Fraud Detection**

Introduction
The Problem Statement and Data Description
The Application Flow
Code Intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Clustering
Model Selection and Tunning
Prediction
Deployment
The Problem Statement and Data Description

# **ML Project 7:- Mushroom Classification**

Introduction
The Application Flow
Code Intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Clustering
Model Selection and Tuning
Predictions
Deployment

## **ML Project 8:- Phishing Classifier**

Introduction
The Application Flow
Code intro and Logging
Validation and Transformation
DB Operations
Data Preprocessing
Clustering

Model Selection and Tuning Prediction Deployment

## **ML Project 9:- Thyroid Detection**

Introduction
The Problem Statement and Data Description
The Application Flow
Code intro and Logging
Vallidation and Transformation
DB Operation
Data Preprocessing
Clustering
Model Selection and Tuning
Prediction
Deployment

## **ML Project 10 :- Visibility Climate**

Introduction
The Problem Statement and Data Description
The Application Flow
Code intro and Logging
Validations and Transformation
DB Operations
Data Preprocessing
Clustering
Model Selection and Tuning
Prediction
Deployment

## **DL ANN - Introduction**

Introduction to Deep Learning
Importance of Deep learning
Why you should study Deep Learning? (Motivation)
ANN
The first Artificial Neuron

#### **DL ANN - Perceptron**

**Overview of Perceptron** 

**More about Perceptron** 

Perceptron implementation using python - 1

Perceptron implementation using python - 2

Perceptron implementation using python - 3

Perceptron implementation using python - 4

Perceptron implementation using python - 5

Perceptron implementation using python - 6

Perceptron implementation using python - 7

Python scripting & modular coding for Perceptron

Python logging basics and docstrings

#### DL ANN -1

**Multilayer Perceptron** 

Forward propagation

Why we need Activation function?

ANN implementation using tf.keras - 1

ANN implementation using tf.keras - 2

ANN implementation using tf.keras - 3

ANN implementation using tf.keras - 4

ANN with Callbacks | Tensorboard | Early Stopping | Model Checkpointing

#### **DL ANN - 2**

Vector

Differentiation

**Partial differentiation** 

Maxima and minima concept

**Gradient descent basics** 

In-depth understanding of Gradient descent with mathematical proof

#### **DL ANN - 3**

Chain rule

**Back propagation** 

#### **DL ANN - 4**

**General problems in training Neural Networks** 

Vanishing and Exploding gradients

**Activation Function Basics** 

Weight initialization

**Activation Functions - 1** 

**Activation functions - 2** 

**Activation functions - 3** 

Transfer learning

Batch normalization -1

Batch normalization -2

Batch normalization -3

#### **DL ANN - 5**

Introduction to fast optimizers

**Momentum optimization** 

NAG

Elongated bowl problem | AdaGrad

**RMSProp** 

Adam

**Loss functions** 

Regularization

**Dropout** 

## **Computer Vision - Introduction**

**Introduction to Course** 

**Course Overview** 

Installing Anaconda, Pycharm & Postman

**Working with Conda Envs** 

**Pycharm Introduction** 

**Pycharm with Conda** 

Pycharm with venv

**Pycharm with Pipenv** 

## **Computer Vision - CNN Foundations**

Why CNN? Building an Intuition for CNN CNN, Kernels, Channels, Feature Maps, Stride, Padding

Receptive Fields, Image Output Dimensionality Calculations, MNIST Dataset Explorations with CNN

MNIST CNN Intuition, Tensorspace.js, CNN Explained, CIFAR 10 Dataset Explorations with CNN

Dropout & Custom Image Classification Dog Cat Dataset Deployment in Heroku, AWS, Azure

# **Computer Vision - CNN Architectures**

LeNet-5
LeNet-5 Practical
AlexNet
AlexNet Practical
VGGNet
VGG16 Practical
Inception
Inception Practical
ResNet

**Resnet Practical** 

## **Computer Vision - Data Augmentation**

What is Data Augmentation?
Benefits of Data Augmentation

## **Computer Vision - Object Detection Basics**

What is Object Detection?
Competitions for Object Detection
Bounding Boxes
Bounding Box Regression
Intersection over Union (IoU)
Precision & Recall
What is Average Precision?

## **Computer Vision - Object Detection Architectures**

Object Detection Family RCNN RCNN Network Architecture Cons of RCNN FAST RCNN
FAST RCNN Network Architecture
FASTER RCNN
FASTER RCNN Network Architecture
YOLO
YOLO Architecture
YOLO Limitations

## Computer Vision - Practicals Object Detection using Tensorflow 1.x

Introduction to TFOD1.x
Using Google Colab with Google Drive
Installation of Libraries in Colab
TFOD1.x Setup in Colab
Visiting the Model Zoo
Inferencing in Colab
Inferencing in Local
Important Configurations Files
Webcam Testing

## Computer Vision - Practicals Training a Custom Cards Detector using Tensorflow1.x

Custom Model Training in TFOD1.x
Our Custom Dataset
Doing Annotations or labeling data
Selection of Pretrained Model from Model Zoo
Files Setup for Training
Let's start Training in Colab
Export Frozen Inference Graph
Inferencing with our trained model in Colab
Training in Local
Inferencing with our trained model in Local

## Computer Vision - Practicals Creating an Cards Detector Web App with TFOD1

Code Understanding
WebApp Workflow
Code Understanding
Prediction with Postman
Debugging our Application

## Computer Vision - Practicals Object Detection using Tensorflow 2.x

Introduction to TFOD2.x
Using the Default Colab Notebook
Google Colab & Drive Setup
Visiting TFOD2.x Model Garden
Inference using Pretrained Model
Inferencing in Local with a pretrained model

## Computer Vision - Practicals Training a Custom Chess Piece Detector using Tensorflow2

Custom Model training in TFOD2.x
Our Custom Dataset TF2
File Setup for Training
Let's start Training
Let's start Training
Stop Training or resume Training
Evaluating the trained model
Convert CKPT to Saved Model
Inferencing using the Custom Trained Model in Colab
Inferencing using the Custom Trained Model in Local PC

#### Computer Vision - Practicals Creating an Chess Piece Detector Web App with TFOD2

Creating a Pycharm project & Environment Setup TF2
Application Workflow
Code understanding
Testing our App with Postman
Debugging our Application

## **Computer Vision - Practicals Object Detection using Detectron2**

Introduction to Detectron2
Detectron2 Colab Setup

## **Computer Vision - Practicals Training a Custom Detector using Detectron2**

**Detectron2 Custom Training Exploring the Dataset** 

Registering Dataset for Training
Let's start Training
Inferencing using the Custom Trained Model in Colab
Evaluating the Model

## **Computer Vision - Practicals Creating an Custom Detector Web App with Detectron2**

Creating a Pycharm project & Environment Setup Detectron2
Application Workflow
Code understanding
Testing our App with Postman
Debugging our Application

## **Computer Vision - Practicals Object Detection using YoloV5**

Introduction to YoloV5 YoloV5 Colab Setup Inferencing using Pre Trained Model

# Computer Vision - Practicals Training a Custom Warehouse Apparel Detector using YoloV5

Custom Training with YoloV5
Exploring the Dataset
Doing Annotations or labeling data
Setting up Google Colab & Drive
Let's start Training
Inferencing using the Custom Trained Model in Colab

## **Computer Vision - Practicals Creating an Warehouse Apparel Detector Web App with YOLOV5**

Creating a Pycharm project & Environment Setup Yolo Application Workflow Code understanding Testing our App with Postman Debugging our Application

## **Computer Vision - Image Segmentation**

**Segmentation Introduction** 

From Bounding Box to Polygon Masks What is Image Segmentation?
Types of Segmentation
MASKRCNN
MASK RCNN Architecture

## **Computer Vision - MASK RCNN Practicals with TFOD**

Segmentation with TFOD1.x
Local Setup MASKRCNN
Exploring the Dataset
Data Annotation
Model Selection
Files Setup for Training
Model Training
Export Frozen Inference Graph
Model Prediction

## **Computer Vision - MASKRCNN practical with Detectron2**

Introduction to Detectron2
Detectron2 Colab Notebook
Exploring the Model Zoo
Detecron2 Colab Setup
Custom Training with Detectron2
Exploring our Dataset
Data Annotation
Data Preparation
Setup for Training
Let's start Training
Inferencing using the Custom Trained Model in Colab
Evaluating the Model

## **Computer Vision - Face Recognition Project**

Introduction to Project
Requirement Gathering
Techstack Selection
Project Installation
Project Demo
Project Workflow
Core Components of the Application
Data Collection Module

Generate Face Embeddings
Training Face Recognition Module
Prediction Pipeline
Entry point of the Application
Application Workflow
Debugging our Application

# **Computer Vision - Object Tracking Project**

Object Tracking project
Project Installation Tracking
Project Demo
Code Understanding

## **Computer Vision - GANS**

Introduction to GANS
GAN Architecture
GAN PRACTICALS Implementation

## **Computer Vision Project - Traffic Vehicle Detection**

Introduction to Vehicle Detection project
Requirement Gathering
Framework Selection
Detailed Project Workflow
Data Collection Scrap
Data Preparation
Data augmentation augmenter
Data Annotations
Model Training
Creating a Pycharm project & Environment Setup TVD
WebApp Workflow
Code Understanding
Prediction with Postman
Debugging our Application

## **Computer Vision Project - Helmet Detection**

Introduction to Helmet Detection project Requirement Gathering

**Techstack Selection** 

**Detailed Project Workflow** 

**Data Collection** 

**Data Preparation** 

**Data Augmentation** 

**Data Annotations** 

**Model Training** 

Creating a Pycharm project & Environment Setup HD

WebApp Workflow

**Code Understanding** 

**Prediction with Postman** 

**Debugging our Application** 

# **Computer Vision Project - Fashion Apparel Detection**

**Introduction to Fashion Apparel Detection project** 

**Requirement Gathering** 

**Techstack Selection** 

**Detailed Project Workflow** 

**Data Collection** 

**Data Preparation** 

**Data Augmentation** 

**Data Annotations** 

**Model Training** 

Creating a Pycharm project & Environment Setup FAD

**Project Demo** 

WebApp Workflow

**Code Understanding** 

**Prediction with Postman** 

**Debugging our Application** 

## **Computer Vision Project - Image TO Text OCR**

**Introduction to Project** 

**Project Installation OCR** 

**Project Demo** 

**Application Workflow** 

**Code Understanding** 

**Debugging our App** 

Different OCR's available

## **Computer Vision Project - Shredder System**

**Introduction to Shredder Systems** 

**Requirement Gathering** 

**Techstack Selection** 

**Data Collection** 

**Data Augmentation** 

**Data Preparation** 

**Data Annotation** 

**Model Selection from Zoo** 

**Model Training** 

Creating a Pycharm project & Environment Setup SS

**Application Workflow** 

**Project Demo** 

**Code Understanding** 

**Debugging our Application** 

**Project Workflow** 

**Project Workflow** 

## Computer Vision Project - Automatic Number plate Recognition with TFOD1.x

**Introduction to ANPR Project** 

**Requirement Gathering** 

**Tech Stack Selection** 

**Data Collection** 

**Data Augmentation** 

**Data Preparation** 

**Data Annotation** 

**Model Selection From Zoo** 

**Model Training** 

Creating a Pycharm project & Environment Setup ANPR

**Application Workflow** 

**Create Google OCR API Key** 

**Project Demo** 

**Code Understanding** 

**Debugging our Application** 

#### **NLP Overview**

**NLP Overview** 

**NLP** very basic

## **NLP Word Embeddings**

TFIDF Word Embeddings Part-1 Word Embeddings Part-2

#### **NLP RNN**

RNN basic RNN Implementation

## **NLP LSTM & GRU**

LSTM Introduction GRU

### **NLP Attention Based Model**

**Encoder Decoder and Attention Mechanism Attention All You Need Paper Understanding** 

## **NLP Transfer Learning in NLP**

**GPT and BERT Model** 

## **NLP Project:- Text to Speech**

Introduction
Project Setup Text to Speech
Project Demo
Code Explanation
Project Workflow
Prediction with Postman
Debugging Application

## **NLP Project:- Speech To Text**

Introduction
Project Setup Speech To Text
Project Demo
Code Explanation
Project Workflow
Prediction with Postman
Debugging Application

## **NLP Project:- Spell Corrector**

Introduction
Project Setup Spell Corrector
Project Demo
Code Explanation
Project Workflow
Prediction with Postman
Debugging Application

# **NLP Project:- Named Entity Recognition**

**NER using BERT** 

## **NLP Project:- Machine Translation & Keyword Spotting**

Machine Translation Keyword Spotting

## **NLP Project:- Keyword Extractor & Summarization**

Keyword Extraction

Extractive Text Summarization

# **NLP project:- Paraphrasing**

**Rephrase Project** 

#### **AIOPS Introduction**

Introduction 1
Introduction 2
Introduction 3
Challenges
AIML Generic Steps

#### **AIOPS Linux**

Introduction to Linux
What is Linux
Important Pieces in Linux
Features of Linux
Evolution of Linux
Differences between Windows and Linux

## **AIOPS Git**

**Git Introduction Types of Version Control** What is Git? Why Git? **Git Installation in Windows Git Installation in Linux Git Setup Git Terminologies** Repositories in GIT **Creating Repository Checking Repository History Doing Commits** git diff git restore **Tagging Branching Branching Practicals** Merging **Merge Conflicts** 

Remote repository
Cloning Repository

Working with Remote Repository
Pushing to Remote Failed in Github

Personal Access Token Setup in Windows Personal Access Token Setup in Linux

Pull Request git Fetch & Pull

Fork

Rebasing

**Interactive Rebasing** 

**Git Rewrite History** 

**Git Rewrite History continued** 

**Cherry Picking** 

**Modify Recent Commits** 

**Git Revert** 

**Git Checkout** 

Git Reset

Git Stash

Git Reflog

**Course Outro** 

#### **AIOPS Docker**

**Docker Introduction** 

What is Docker?

Why Docker?

**Benefits of Docker** 

What is Container?

**Containers vs VM** 

**Containers vs Image** 

**Docker Editions** 

What Docker is not?

**Important Terminologies** 

**Docker Setup in Windows** 

**Docker Setup in Linux** 

**Docker Setup in Mac** 

**Docker Basic Commands part 1** 

**Docker Basic Commands part 2** 

**Docker Run Part 1** 

**Docker Run Part 2** 

**Docker Images** 

Creating a new image

**Environment variables** 

**Commands & Entrypoints** 

**Docker Compose** 

**Voting Application Understanding** 

**Docker Compose Versions** 

**Docker Compose Networks** 

**Voting Application with Docker Run** 

## **BigData - Introduction to Big Data and Data Engineering**

**Big Data Engineering** 

## **BigData - Introduction to Distributed Systems - Hadoop and MapReduce**

**Big Data Engineering Introduction** 

## **BigData - Map Reduce & YARN**

Big Data Hadoop Map Reduce YARN Hadoop Map Reduce Hands On

#### **BigData - Hive**

Apache hive

## **BigData - Hive Hands On**

**Apache hive Hands On** 

## **BigData - NoSQL and Hbase**

Big Data HBase Hbase hands On

#### BigData - Spark

Spark - Introduction

Big Data Engineering using PySpark- RDDs

Spark hands on - RDD

Big Data Engineering using PySpark- Core, Internals, Architecture

Apache Spark Actions\_ Transformations

Apache Spark Caching

Big Data Engineering using PySpark- Shared Vars, Coalesce Repartition

Big Data Engineering using PySpark- Dataframes

Spark hands on - Dataframe
Spark hands on - Databricks
Big Data Engineering using PySpark- Catalyst& Tungsten

## **BigData - Spark ML**

Big Data Engineering using PySpark- MLLib Spark hands On - Spark ML Lib

## **BigData - Spark Streaming**

Big Data Engineering using PySpark- Streaming Part 1
Big Data Engineering using PySpark- Streaming Part 2
Spark hands On - Spark Streaming

# BigData - Kafka

Big Data Kafka Big Data Kafka Hands on

## **BigData - Apache Airflow - Workflow Management Platform**

Big Data - Airflow Big Data Airflow Hands On

## **Big Data Projects**

IoT Sensor data pipeline using Kafka-Spark Streaming Product Reccomendation Engine using Kafka-Spark Streaming Short Video App Analytics

## **Basic Charts in Power BI**

- 2.0 Basic Charts in Power BI Desktop
- 2.1 Column Chart in Power BI
- 2.2 Stacked Column Chart in Power BI
- 2.3 Pie Chart in Power Bl

- 2.4 Donut Chart in Power BI
- 2.5 Funnel Chart in Power BI
- 2.6 Ribbon Chart
- 2.7 Include and Exclude
- 2.8 Export data from Visual

## **Working with Maps**

- 3.1 Creating a Map in Power BI
- 3.2 Filled Map
- 3.3 Map with Pie Chart
- 3.4 Formatting in Map
- 3.5 Change Background in Map
- 3.6 Map of India in Power BI
- 3.7 Map of Australia in Power BI

#### **Tables and Matrix in Power BI**

- 4.0 Table and Matrix in Power Bl
- 4.1 Creating a Table in Power BI
- 4.2 Formatting a Table
- 4.3 Conditional Formatting in Table
- 4.4 Aggregation in Table
- 4.5 Matrix in Power BI
- **4.6 Conditional Formatting in Matrix**
- 4.7 Hirearchies in Matrix
- 4.8 Sub-Total and Total in Matrix
- 4.9 Number Formatting in Table

#### Introduction to tableau

Tableau Introduction
Download and Install Tableau
Tableau Vs Excel

#### Charts - 1

Column Chart Horizontal Bar Chart Stacked Column Chart Stacked Bar Chart Keep Only,Exclude
Keep Only,Exclude2\_Normal
Publish to Tableau Public

## Charts - 2

Pie Chart
Multiple Pie Chart
TreeMap\_Editing
Packed Bubble Chart
Word Cloud OR Word Map
Formatting payal

## Charts - 3

Data Types in Tableau Filled Map Symbol Maps India Map Histogram

## Charts - 4

Text Table
Text Table with Multiple Measures
Measure Names and Measure Values
Line Chart
Line Chart with Multiple Measures
Discrete Vs Continous Line Chart
Discrete Vs Continuous

## Charts - 5

Lollipop Chart
Line Vs Column Chart
Dual Axis Chart
Column vs Shapes
Bar in Bar Chart

#### SQL

**Database Architecture** 

Introduction to SQL

**Constraints** 

**Data Definition Language (DDL)** 

Data Query Language (DQL)

**Data Manipulation Language (DML)** 

**Joins** 

**Import Export** 

**Aggregate Functions** 

Order by, Having & Limit Clause

**String Functions** 

**Datetime functions** 

**Understanding Regular Expressions** 

**Nested Queries** 

Views

**Stored Procedures** 

WindowsFn

**Python-SQL Connectivity** 

#### **Excel**

Introduction to Excel Pre-defined functions

**Datetime Funtions** 

String functions

**Mathematical functions** 

Lookup

**Logical & Error Functions** 

# **Chatbot - Google Dialog Flow**

What is Chatbot?

Why Chatbot?

**Types of Chatbot** 

**Use of Chatbot** 

**Examples of chatbot** 

**Chatbot Architecture** 

**Google Account** 

Dialogue Console quick review

**Dialogflow - Agents** 

**Dialogflow - Create and mange agents** 

**Dialogflow - Prebuilt Agents** 

**Dialogflow - Multilingual agents** 

Dialogflow - Mega agents

**Dialogflow - Intents** 

**Dialogflow - Create and manage intents** 

**Dialogflow - Training Phrases** 

**Dialogflow - Actions and parameters** 

**Dialogflow - Responses** 

Dialogflow - Rich response messages

**Dialogflow - Default intents** 

Dialogflow - Entities

**Dialogflow - Entity options** 

**Dialogflow - System entities** 

**Dialogflow - Custom entities** 

**Dialogflow - Contexts** 

**Dialogflow - Input and Output contexts** 

Dialogflow - Follow-up intents

Dialogflow - Follow-up intents creation

**Dialogflow - Events** 

Dialogflow - Fulfillment

Dialogflow - Inline editor

Dialogflow - Webhook service

Overview

**Create Agent in Dialogflow** 

**Create Intent and Entities** 

**Food order Intent** 

Why integration required?

**Telegram Integration** 

facebook integration

facebook integration test

Slack Integration

**Covid-19 chatbot Overview** 

Agent & intent creation

World stats info intent

webhook code for welcome intent

**Get Stats Covid code** 

world Covid code

**Deployment** 

**Enable webhook** 

Summary

## **Chatbot - RASA**

What is Chatbot?

Why Chatbot?

What is Rasa?

Why Rasa?

Create a Virtual Environment using conda

**Installation of Rasa in Windows** 

Introduction to Rasa NLU - Intents and Entities

**Creating Intents & Entities Examples: Training Data** 

Rasa NLU File structure

**Defining NLU Pipeline in Config File** 

Install RASA-x

Train our first Rasa NLU model

Rasa NLU Entity Synonyms & Lookup Tables

Introduction to Custom Components in RASA NLU

Introduction of Transfer Learning and Pre-trained Word Embeddings

**Custom Gensim embeddings in RASA** 

**RASA Core** 

**Custom Action Defined** 

**RASA Core-Stories** 

**Introduction of Dialogue Policies** 

**Memoization & Mapping Policy** 

Machine learning policy

**Priority Policies** 

Add intent domain.yml

**Update response** 

Add stories.md

Train model

Telegram integration

Facebook integration

Twilio account

Whatsapp integration url

**Course summary** 

#### Chatbot - Amazon Lex

Introduction

What is Chatbot?

Why Chatbot?

What is Lex?

Lex supported languages

**Programming Model** 

Intent & Slots

**Model Building APIs** 

**Runtime API Operations** 

**Managing Messages** 

**Confidence Score** 

**Conversation Log** 

**Built-in Intents** 

**Built-in Slot Types** 

**Custom Slot Types** 

**Sentiment Analysis** 

**Configuring Lambda functions as fulfillment** 

# Integration Custom Building Chatbot Overview

### **Chatbot - Azure Luis**

**Course Introduction** 

What is Chatbot?

Why Chatbot?

What is LUIS?

**Intent & Utterances** 

**Prebuilt Domain intent** 

**Using Entities** 

**Entity types** 

Utterances

Pattern

**Machine learning features** 

**Prediction score** 

**Data management** 

LUIS and QnA maker

CI/CD with Luis

Overview

Azure portal setup

Intent/entity

**Luis App credentials** 

Installation

Code walkthrough

Bot emulator

Summary

## **Interview Preparation - Introduction & Induction**

Induction & Course Introduction
Impact of Data Science in today's world & Roles in Data Science

# **Interview Preparation - Transition Stories**

Transition story
Transition Story
Transition Story and Resume Discussion

## **Interview Preparation - AI Projects Discussion**

Insurance Fraud Detection
Forest Cover Classification
Project Architecture Discussion
Year Wise Resume Discussion
Project Architecture Discussion
Project Architecture Discussion - 2
Brand Measure Project Discussion
Project Architecture Discussion - 3
Megatron Project Discussion
Python Discussion

## **Interview Preparation - Python**

Python Discussion Python Discussion

## **Interview Preparation - Databases**

MYSQL and MongoDB Discussion Interview Question Discussion - 2

## **Interview Preparation - Interview Questions Discussion**

Interview Question Discussion
Resume Discussion
Interview Question Discussion - 3
Interview Question Discussion - 4
Interview Question Discussion - 5

# **Interview Preparation - Project Discussion**

Vision-Based Attendance System
Face Recognition & Mlops Discussion
Mlops Discussion
Brand Measure Project Discussion
NLP Use Cases Discussion

# **Interview Preparation - Interview Questions Discussions**

Interview Question Discussion - 1
Interview Question Discussion - 2
Interview Question Discussion

# **Interview Preparation - General Discussion**

Discussion Session - 1
Discussion Session - 2