Full Stack Data Science BootCamp 2.0

Topic Name : DATA SCIENCE

Sub-topic Name : FULL STACK DATA SCIENCE

Course link : https://ineuron.ai/course/Full-Stack-Data-Science-BootCamp-2.0

Course Description :-

This is a full stack data science course with a live mentor-led certification programme and a full-time one-year internship provided by iNeuron intelligence private limited, where you will learn all the stack required to work in the data science, data analytics, and big data industries, including machine learning operations and cloud infrastructure, as well as real-time industry project and product development with the iNeuron product development team, and you will contribute on various levels.

Course Features :-

=> Full stack Data Science masters certification

=> Job guarantee otherwise refund

=> One year of internship Anytime

=> Online Instructor-led learning: Live teaching by instructors

=> 56 + hands-on industry real-time projects.

=> 500 hours live interactive classes.

=> Every week doubt clearing session after the live classes.

=> Lifetime Dashboard access

=> Doubt clearing one to one

=> Doubt clearing through mail and skype support team

=> Assignment in all the module

=> Quiz in every module

=> A live project with real-time implementation

=> Resume building Anytime

=> Career guidance Anytime

=> Interview Preparation Anytime

=> Regular assessment

=> Job Fair and Internal Hiring

=> Mock Interview Anytime

What you will learn :-

=> Python

=> Stats

=> Machine learning

=> Deep learning

=> Computer vision

=> Natural language processing

=> Data analytics

=> Big data

=> Ml ops

=> Cloud

=> Real Time projects

=> Architecture

=> Domain wise project

=> Databases

=> Negotiations skills

=> Mock interview

=> Interview preparation

=> Resume building after every module

Requirements :-

=> System with minimum i3 processor or better

=> At least 4 GB of RAM

=> Working internet connection

=> Dedication to learn

Instructors :-

=> Sunny Bhaveen Chandra :

~ Sr. Data Scientist and lecturer at iNeuron.ai with working experience in computer vision, natural language processing and embedded systems. Hands-on experience leveraging machine learning, deep learning, transfer learning models to solve challenging business problems. Also, he has a vast interest in Robotics.

=> krish naik :

~ Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

=> Sudhanshu Kumar :

~ Having 8+ years of experience in Big data, Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

=> Sunny Savita :

~ I'm an AI enthusiast, graduate in Computer science and engineering. Currently working with iNeuron.ai as a Data Scientist and having 2+ years of experience. I have skills in big data, machine learning, computer vision, Natural language processing. My expertise also includes project design development and implementation with AIOps tools.

Curriculum details :-

=> Welcome to the Course :

~ Course Overview
~ Dashboard Introduction

=> 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
~ SQL lite, 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*
~ *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 Intution for CNN
~ CNN, Kernels, Channels, Feature Maps, Stride, Padding
~ Receptive Fields, Image Output Dimensationality Calculations, MNIST Dataset Explorations with CNN
~ MNIST CNN Intutiton, 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
~ Visting 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 BI
~ 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 BI

~ 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*

Pro Aptitude - Data Structures and Algorithms

Topic Name : APTITUDE

Sub-topic Name : APTITUDE

Course link : https://ineuron.ai/course/Pro-Aptitude---Data-Structures-and-Algorithms

Course Description :-

This course is designed mostly for Data structure and Algorithms test takers.

Course Features :-

=> Quizzes

=> Course completion certificate

What you will learn :-

=> DSA Theoritical Test

=> DSA Practical Test

Requirements :-

=> System with minimum i3 processor or better

=> At least 4 GB of RAM

=> Working internet connection

=> Dedication to solve

Curriculum details :-

=> Data structure and Algorithms Test :

~ DSA Test 1
~ DSA Test 2
~ DSA Test 3
~ DSA Test 4

Data Science Masters

Topic Name : DATA SCIENCE

Sub-topic Name : FULL STACK DATA SCIENCE

Course link : https://ineuron.ai/course/Data-Science-Masters

Course Description :-

This is a data science masters course where you will learn all the stack required to work in data science, data analytics and big data industry including ML ops and cloud infrastructure .

Course Features :-

=> Full stack Data Science masters certification

=> 56 + hands-on industry real-time projects.

=> 500 hours of recorded classes.

=> Lifetime Dashboard access

=> Assignment in all the module

=> Quiz in every module

=> A live project with real-time implementation

What you will learn :-

=> Python

=> Stats

=> Machine learning

=> Deep learning

=> Computer vision

=> Natural language processing

=> Data analytics

=> Big data

=> Ml ops

=> Cloud

=> Data structure and algorithm

=> Architecture

=> Domain wise project

=> Databases

=> Negotiations skills

=> Mock interview

=> Interview preparation

=> Resume building after every module

Requirements :-

=> Dedication

=> Computer with i3 and above configuration

Instructors :-

=> Sunny Bhaveen Chandra :

~ Sr. Data Scientist and lecturer at iNeuron.ai with working experience in computer vision, natural language processing and embedded systems. Hands-on experience leveraging machine learning, deep learning, transfer learning models to solve challenging business problems. Also, he has a vast interest in Robotics.

=> Sourangshu Pal :

~ Visual Computing Engineer and instructor at iNeuron.ai having 3 years of diverse experience in the discipline of visual computing with specialization in Deep Learning and Computer Graphics. Loves to analyze, process, and model visual data then interpret the insights to create actionable plans for solving challenging business problems.

=> Khushali Shah :

~ A data scientist having rich experience working with MNCs and start-ups in the field of data science and machine learning. She has expertise in Chatbot development for various domains & been developing professionally for 6+ years with diverse job history. She also had positions in software module development, web app development, functional designs, requirement gathering, client interaction, and server setup/admin & can help everywhere in the stack; she loves wearing multiple hats to an extent. She also believes in enhancing her skills by training and learning new things day by day.

=> krish naik :

~ Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

=> Sudhanshu Kumar :

~ Having 8+ years of experience in Big data, Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

Curriculum details :-

=> Course Introduction :

~ course overview and dashboard description
~ Introduction of data science and its application in day to day life
~ Programming language overview
~ Installation (tools: sublime, vscode, pycharm, anaconda, atom,jupyter notebook, kite)
~ Virtual environment
~ Why python

=> Python Basic :

~ Introduction of python and comparison with other programming language Preview
~ Installation of anaconda distribution and other python ide
~ Python objects, number & Booleans, strings
~ Container objects, mutability of objects
~ Operators - arithmetic, bitwise, comparison and assignment operators, operators precedence and associativity
~ Conditions (if else, if-elif-else), loops (while, for)
~ Break and continue statement and range function

=> String Objects :

~ basic data structure in python
~ String object basics
~ String inbuilt methods
~ Splitting and joining strings
~ String format functions

=> List Object Basics :

~ List methods
~ List as stack and queues
~ List comprehensions

=> Tuples, Sets, Dictionaries & its Function :

~ Dictionary object methods
~ Dictionary comprehensions
~ Dictionary view objects
~ Functions basics, parameter passing, iterators
~ Generator functions
~ Lambda functions
~ Map, reduce, filter functions

=> Memory Management :

~ Multithreading
~ Multiprocessing

=> OOPs Concepts :

~ oops basic concepts.
~ Creating classes
~ Pillars of oops
~ Inheritance
~ Polymorphism
~ Encapsulation
~ Abstraction
~ Decorator
~ Class methods and static methods
~ Special (magic/dunder) methods
~ Property decorators - getters, setters, and deletes

=> Files :

~ Working with files
~ Reading and writing files
~ Buffered read and write
~ Other file methods
~ Logging, debugger
~ Modules and import statements

=> Exception Handling and Difference between Exception and Error :

~ Exceptions handling with try-except
~ Custom exception handling
~ List of general use exception
~ Best practice exception handling

=> GUI Framework :

~ What is desktop and standalone application
~ Use of desktop app
~ Examples of desktop app
~ Tinker
~ Kivy

=> Database :

~ SQLite
~ MySQL
~ Mongo dB
~ NoSQL - Cassandra

=> Web API :

~ What is web API
~ Difference b/w API and web API
~ Rest and soap architecture

~ *Restful services*

=> Flask :

~ *Flask introduction*
~ *Flask application*
~ *Open link flask*
~ *App routing flask*
~ *Url building flask*
~ *Http methods flask*
~ *Templates flask*
~ *Flask project: food app*
~ *Postman*
~ *Swagger*

=> Django :

~ *Django introduction*
~ *Django project: weather app*
~ *Django project: memes generator*
~ *Django project: blog app*
~ *Django project in cloud*

=> Stream Lit :

~ *Stream lit introduction*
~ *Stream lit project structure*
~ *Stream lit project in cloud*

=> Pandas Basic :

~ *Python pandas - series*
~ *Python pandas data frame*
~ *Python pandas panel*
~ *Python pandas - basic functionality*
~ *Reading data from different file system*

=> Pandas Advance :

~ *Python pandas re indexing python*
~ *Pandas iteration*
~ *Python pandas sorting.*
~ *Working with text data options & customization*
~ *Indexing & selecting*
~ *Data statistical functions*
~ *Python pandas - window functions*
~ *Python pandas - date functionality*
~ *Python pandas time delta*
~ *Python pandas - categorical data*
~ *Python pandas visualization*
~ *Python pandas - iotools*

=> Dask :

~ *Dask Array*
~ *Dask Bag*
~ *Dask DataFrame*
~ *Dask Delayed*
~ *Dask Futures*
~ *Dask API*
~ *Dask SCHEDULING*
~ *Dask Understanding Performance*
~ *Dask Visualize task graphs*
~ *Dask Diagnostics (local)*
~ *Dask Diagnostics (distributed)*
~ *Dask Debugging*
~ *Dask Ordering*

=> Python Numpy :

~ *Numpy - ND array object.*
~ *Numpy - data types.*
~ *Numpy - array attributes.*
~ *Numpy - array creation routines.*
~ *Numpy - array from existing.*
~ *Data array from numerical ranges.*
~ *Numpy - indexing & slicing.*
~ *Numpy advanced indexing.*
~ *Numpy broadcasting.*
~ *Numpy - iterating over array.*
~ *Numpy - array manipulation.*
~ *Numpy - binary operators.*
~ *Numpy - string functions.*
~ *Numpy - mathematical functions.*
~ *Numpy - arithmetic operations.*
~ *Numpy - statistical functions.*
~ *Sort, search & counting functions.*
~ *Numpy - byte swapping.*
~ *Numpy - copies &views.*
~ *Numpy - matrix library.*
~ *Numpy - linear algebra*

=> Visualization :

~ *Matplotlib*
~ *Seaborn*
~ *Cufflinks*
~ *Plotly*
~ *Bokeh*

=> Statistics Basic :

~ *Introduction to basic statistics terms*
~ *Types of statistics*
~ *Types of data*
~ *Levels of measurement*
~ *Measures of central tendency*
~ *Measures of dispersion*
~ *Random variables*
~ *Set*
~ *Skewness*
~ *Covariance and correlation*

=> Probability Distribution Function :

~ *Probability density/distribution function*
~ *Types of the probability distribution*
~ *Binomial distribution*
~ *Poisson distribution*
~ *Normal distribution (Gaussian distribution)*
~ *Probability density function and mass function*
~ *Cumulative density function*
~ *Examples of normal distribution*
~ *Bernoulli distribution*
~ *Uniform distribution*
~ *Z stats*
~ *Central limit theorem*
~ *Estimation*

=> Statistics Advance :

~ *a Hypothesis*
~ *Hypothesis testings mechanism*
~ *P-value*
~ *T-stats*
~ *Student t distribution*
~ *T-stats vs. Z-stats: overview*
~ *When to use a t-tests vs. Z-tests*
~ *Type 1 & type 2 error*
~ *Bayes statistics (Bayes theorem)*
~ *Confidence interval(ci)*
~ *Confidence intervals and the margin of error*
~ *Interpreting confidence levels and confidence intervals*
~ *Chi-square test*
~ *Chi-square distribution using python*
~ *Chi-square for goodness of fit test*
~ *When to use which statistical distribution?*
~ *Analysis of variance (anova)*
~ *Assumptions to use anova*
~ *Anova three type*
~ *Partitioning of variance in the anova*
~ *Calculating using python*
~ *F-distribution*
~ *F-test (variance ratio test)*
~ *Determining the values of f*
~ *F distribution using python*

=> Linear Algebra :

~ *linear algebra*
~ *Vector*
~ *Scaler*
~ *Matrix*
~ *Matrix operations and manipulations*
~ *Dot product of two vectors*
~ *Transpose of a matrix*
~ *Linear independence of vectors*
~ *Rank of a matrix*
~ *Identity matrix or operator*
~ *Determinant of a matrix*
~ *Inverse of a matrix*
~ *Norm of a vector*
~ *Eigenvalues and eigenvectors*
~ *Calculus*

=> Solving Stats Problem with Python

=> Stats Problem Implementation with Spicy

=> Introduction to Machine Learning :

~ *Ai vs ml vs dl vs ds*
~ *Supervised, unsupervised, semi-supervised, reinforcement learning*
~ *Train, test, validation split*
~ *Performance*
~ *Overfitting, under fitting*
~ *Bias vs variance*

=> Feature Engineering :

~ *Handling missing data*
~ *Handling imbalanced data*
~ *Up-sampling*
~ *Down-sampling*
~ *Smote*
~ *Data interpolation*

~ *Handling outliers*
~ *Filter method*
~ *Wrapper method*
~ *Embedded methods*
~ *Feature scaling*
~ *Standardization*
~ *Mean normalization*
~ *Min-max scaling*
~ *Unit vector*
~ *Feature extraction*
~ *Pca (principle component analysis)*
~ *Data encoding*
~ *Nominal encoding*
~ *One hot encoding*
~ *One hot encoding with multiple categories*
~ *Mean encoding*
~ *Ordinal encoding*
~ *Label encoding*
~ *Target guided ordinal encoding*
~ *Covariance*
~ *Correlation check*
~ *Pearson correlation coefficient*
~ *Spearmans rank correlation*
~ *Vif*

=> Feature Selection :

~ *Feature selection*
~ *Recursive feature elimination*
~ *Backward elimination*
~ *Forward elimination*

=> Exploratory Data Analysis :

~ *Feature engineering and selection.*
~ *Analyzing bike sharing trends.*
~ *Analyzing movie reviews sentiment.*
~ *Customer segmentation and effective cross selling.*
~ *Analyzing wine types and quality.*
~ *Analyzing music trends and recommendations.*
~ *Forecasting stock and commodity prices*

=> Regression :

~ *Linear regression*
~ *Gradient descent*
~ *Multiple linear regression*
~ *Polynomial regression*
~ *R square and adjusted r square*
~ *Rmse , mse, mae comparison*
~ *Regularized linear models*
~ *Ridge regression*
~ *Lasso regression*
~ *Elastic net*
~ *Complete end-to-end project with deployment on cloud and ui*

=> Logistics Regression :

~ *Logistics regression in-depth intuition*
~ *In-depth mathematical intuition*
~ *In-depth geometrical intuition*
~ *Hyper parameter tuning*
~ *Grid search cv*
~ *Randomize search cv*
~ *Data leakage*
~ *Confusion matrix*
~ *Precision,recall,f1 score ,roc, auc*
~ *Best metric selection*
~ *Multiclass classification in lr*
~ *Complete end-to-end project with deployment in multi cloud platform*

=> Decision Tree :

~ *Decision tree classifier*
~ *In-depth mathematical intuition*
~ *In-depth geometrical intuition*
~ *Confusion matrix*
~ *Precision, recall,f1 score ,roc, auc*
~ *Best metric selection*
~ *Decision tree repressor*
~ *In-depth mathematical intuition*
~ *In-depth geometrical intuition*
~ *Performance metrics*
~ *Complete end-to-end project with deployment in multi cloud platform*

=> Support Vector Machines :

~ *Linear svm classification*
~ *In-depth mathematical intuition*
~ *In-depth geometrical intuition*
~ *Soft margin classification*
~ *Nonlinear svm classification*
~ *Polynomial kernel*
~ *Gaussian, rbf kernel*
~ *Data leakage*
~ *Confusion matrix*

~ precision, recall,f1 score ,roc, auc
~ Best metric selection
~ Svm regression
~ In-depth mathematical intuition
~ In-depth geometrical intuition
~ Complete end-to-end project with deployment

=> Naive Bayes :

~ Bayes theorem
~ Multinomial nave Bayes
~ Gaussian nave Bayes
~ Various type of Bayes theorem and its intuition
~ Confusion matrix
~ precision ,recall,f1 score ,roc, auc
~ Best metric selection
~ Complete end-to-end project with deployment

=> Ensemble Technique and its Types :

~ Definition of ensemble techniques
~ Bagging technique
~ Bootstrap aggregation
~ Random forest (bagging technique)
~ Random forest repressor
~ Random forest classifier
~ Complete end-to-end project with deployment

=> Boosting :

~ Boosting technique
~ Ada boost
~ Gradient boost
~ Xgboost
~ Complete end-to-end project with deployment

=> Stacking :

~ Stacking technique
~ Complete end-to-end project with deployment

=> KNN :

~ Knn classifier
~ Knn repressor
~ Variants of knn
~ Brute force knn
~ K-dimension tree
~ Ball tree
~ Complete end-to-end project with deployment

=> Dimensionality Reduction :

~ The curse of dimensionality
~ Dimensionality reduction technique
~ Pca (principle component analysis)
~ Mathematics behind pca
~ Scree plots
~ Eigen-decomposition approach

=> Clustering :

~ Clustering and their types
~ K-means clustering
~ K-means++
~ Batch k-means
~ Hierarchical clustering
~ Dbscan
~ Evaluation of clustering
~ Homogeneity, completeness and v-measure
~ Silhouette coefficient
~ Davies-bouldin index
~ Contingency matrix
~ Pair confusion matrix
~ Extrinsic measure
~ Intrinsic measure
~ Complete end-to-end project with deployment

=> Anomaly Detection :

~ Anomaly detection types
~ Anomaly detection applications
~ Isolation forest anomaly detection algorithm
~ Isolation forest anomaly detection algorithm
~ Support vector machine anomaly detection algorithm
~ Dbscan algorithm for anomaly detection
~ Complete end-to-end project with deployment

=> Time-Series :

~ What is a time series?
~ Old techniques
~ Arima
~ Acf and pacf
~ Time-dependent seasonal components.
~ Autoregressive (ar),
~ Moving average (ma) and mixed arma- modeler.
~ The random walk model.
~ Box-jenkins methodology.
~ Forecasts with arima and var models.

~ Dynamic models with time-shifted explanatory variables.
~ The koyck transformation.
~ Partial adjustment and adaptive expectation models.
~ Granger's causality tests.
~ Stationarity, unit roots and integration
~ Time series model performance
~ Various approach to solve time series problem
~ Complete end-to-end project with deployment
~ Prediction of nifty stock price and deployment

=> NLP Basic :

~ Tokenization
~ Pos tags and chunking
~ Stop words
~ Stemming and lemmatization
~ Named entity recognition (ner)
~ Word vectorization (word embedding)
~ Tfidf
~ Complete end-to-end project with deployment

=> Machine Learning Pipeline :

~ Aws segmaker
~ Aure ml studio
~ Ml flow
~ Kube flow

=> Model Retraining Approach

=> Auto ML :

~ H2o
~ Pycaret
~ Auto sklearn
~ Auto time series
~ Auto viml
~ Auto gluon
~ Auto viz
~ Tpot
~ Auto neuro

=> Neural Network A Simple perception :

~ Detail mathematical explanation
~ Neural network overview and its use case.
~ Various neural network architect overview.
~ Use case of neural network in nlp and computer vision.
~ Activation function -all name
~ Multilayer network.
~ Loss functions. - all 10
~ The learning mechanism.
~ Optimizers. - all 10
~ Forward and backward propagation.
~ Weight initialization technique
~ Vanishing gradient problem
~ Exploding gradient problem
~ Visualization of nn

=> Hardware Setup - GPU :

~ Gpu introduction.
~ Various type of gpu configuration.
~ Gpu provider and its pricing.
~ Paper space gpu setup.
~ Running model in gpu

=> Tensor Flow Installation Environment Setup For Deep Learning :

~ Colab pro setup
~ Tensor flow installation 2.0 .
~ Tensor flow installation 1.6 with virtual environment.
~ Tensor flow 2.0 function.
~ Tensor flow 2.0 neural network creation.
~ Tensor flow 1.6 functions.
~ Tensor flow 1.6 neural network and its functions.
~ Keras introduction.
~ Keras in-depth with neural network creation.
~ Mini project in tensorflow.
~ Tensorspace
~ Tensorboard integration
~ Tensorflow playground
~ Netron

=> Pytorch :

~ pytorch installation.
~ Pytorch functional overview.
~ Pytorch neural network creation.

=> Mxnet :

~ Mxnet installation
~ Mxnet in depth function overview
~ Mxnet model creation and training

=> Keras Tuner :

~ Keras tuner installation and overview
~ Finding best parameter from keras tuner
~ Keras tuner application across various neural network

=> CNN Overview :

~ *Cnn definition*
~ *Various cnn based architecture*
~ *Explanation end to end cnn network*
~ *Cnn explainer*
~ *Training cnn*
~ *Deployment in azure cloud*
~ *Performance tuning of cnn network*

=> Advance Computer Vision - Part 1 :

~ *Various cnn architecture with research paper and mathematics*
~ *Lenet-5 variants with research paper and practical*
~ *Alexnet variants with research paper and practical*
~ *Googlenet variants with research paper and practical*
~ *Transfer learning*
~ *Vggnet variants with research paper and practical*
~ *Resnet variants with research paper and practical*
~ *Inception net variants with research paper and practical*
~ *Darknet variants with research paper and practical*

=> Advance Computer Vision - Part 2 :

~ *Object detection in-depth*
~ *Transfer learning*
~ *Rcnn with research paper and practical*
~ *Fast rcnn with research paper and practical*
~ *Faster r cnn with research paper and practical*
~ *Ssd with research paper and practical*
~ *Ssd lite with research paper and practical*

=> Training of Custom Object Detection :

~ *Tfod introduction*
~ *Environment setup wtih tfod*
~ *Gpu vs tpu vs cpu*
~ *Various gpu comparison*

=> Advance Computer Vision - Part 3 :

~ *Yolo v1 with research paper and practical*
~ *Yolo v2 with research paper and practical*
~ *Yolo v3 with research paper and practical*
~ *Yolo v4 with research paper and practical*
~ *Yolo v5 with research paper and practical*
~ *Retina net*
~ *Face net*
~ *Detectron2 with practical and live testing*

=> Object Segmentation :

~ *Semantic segmentation*
~ *Panoptic segmentation*
~ *Masked rcnn*
~ *Practical with detectron*
~ *Practical with tfod*

=> Object Tracking :

~ *Detail of object tracking*
~ *Kalman filtering*
~ *Sort*
~ *Deep sort*
~ *Object tracking live project with live camera testing*

=> OCR :

~ *Introduction to ocr*
~ *Various framework and api for ocr*
~ *Practical implementation of ocr*
~ *Live project deployment for bill parsing*

=> Image Captioning :

~ *Image captioning overview*
~ *Image captioning project with deployment*

=> Tensorflow JS :

~ *Tensorflow js overview*
~ *Tfjs implementation*

=> Model Conversion :

~ *Tfjs*
~ *Tflite*
~ *Tfrt*
~ *Torch to tf model*
~ *Mxnet to tf conversion*

=> Advance NLP with Deep Learning :

~ *Overview computational linguistic.*
~ *History of nlp.*
~ *Why nlp*
~ *Use of nlp*

=> Text Processing Importing Text :

~ *Web scrapping.*
~ *Text processing*
~ *Understanding regex.*
~ *Text normalization*
~ *Word count.*

~ *Frequency distribution.*
~ *Text annotation.*
~ *Use of annotator.*
~ *String tokenization*
~ *Annotator creation.*
~ *Sentence processing.*
~ *Lemmatization in text processing*
~ *Pos*
~ *Named entity recognition*
~ *Dependency parsing in text.*
~ *Sentimental analysis*

=> Spacy :

~ *Spacy overview.*
~ *Spacy function*
~ *Spacy function implementation in text processing.*
~ *Pos tagging, challenges and accuracy.*
~ *Entities and named entry recognition*
~ *Interpolation, language models*
~ *Nltk*
~ *Text blob*
~ *Stanford nlp*

=> RNN :

~ *Recurrent neural networks.*
~ *Long short term memory (lstm)*
~ *Bi lstm.*
~ *Stacked lstm*
~ *Gru implementation.*
~ *Building a story writer using character level rnn.*

=> Word Embedding :

~ *Word embedding*
~ *Co-occurrence vectors*
~ *Word2vec*
~ *Doc2vec*

=> Attention Based Model :

~ *Seq 2 seq.*
~ *Encoders and decoders.*
~ *Attention mechanism.*
~ *Attention neural networks*
~ *Self-attention*

=> Transfer Learning in NLP :

~ *Introduction to transformers.*
~ *Bert model.*
~ *Elmo model.*
~ *Gpt1 model*
~ *Gpt2 model.*
~ *Albert model.*
~ *Distilbert model*

=> Deployment of Model and Performance Tuning :

~ *Deep learning model deployment strategies.*
~ *Deep learning project architecture*
~ *Deep learning model deployment phase.*
~ *Deep learning model retraining phase.*
~ *Deep learning model deployment in aws.*
~ *Deep learning model deployment in azure.*
~ *Deep learning model deployment in gcloud.*

=> API for Speech and Vision :

~ *AWS*
~ *Azure*
~ *GCP*

=> Big Data Introduction :

~ *What is big data?*
~ *Big data application*
~ *Big data pipeline*

=> Hadoop :

~ *Hadoop introduction*
~ *Hadoop setup and installation*

=> Spark :

~ *Spark*
~ *Spark overview.*
~ *Spark installation.*
~ *Spark rdd.*
~ *Spark data frame.*
~ *Spark architecture.*
~ *Spark ml lib*
~ *Spark NLP*
~ *Spark linear regression*
~ *Spark logistic regression*
~ *Spark decision tree*
~ *Spark naive bayes*
~ *Spark xg boost.*
~ *Spark time series*
~ *Spark deployment in local server*

~ *Spark job automation with*
~ *Scheduler*

=> Kafka :

~ *Kafka introduction*
~ *Kafka installation*
~ *Spark streaming*
~ *Spark with Kafka*

=> ML Ops :

~ *Jenkins*
~ *Kubernetes*
~ *Elaticsearch*
~ *Kibana*
~ *Git*

=> SQL :

~ *Introduction*
~ *ER Daigram*
~ *Schema Design*
~ *Normalization*
~ *SQL SELECT Statement*
~ *SQL SELECT Using common functions*
~ *SQL JOIN Overview*
~ *INNER JOIN*
~ *LEFT JOIN*
~ *RIGHT JOIN*
~ *FULL JOIN*
~ *SQL Best Practice*
~ *INNER JOIN - Advanced*
~ *INNER JOIN & LEFT JOIN Combo*
~ *SELF JOIN*
~ *Joins & Aggregation - Subqueries*
~ *Sorting*
~ *Independent Subqueries*
~ *Correlated Subqueries*
~ *Analytic Function*
~ *Set Operations*
~ *SQL Views*
~ *Create a view*
~ *Create a view using DDL*
~ *SQL Insert - Advanced Technique*
~ *INSERT to create a table*
~ *INSERT new data to an existing table-1*
~ *INSERT new data to an existing table-2*
~ *INSERT new data to an existing table-3*
~ *INSERT new data to an existing table-4*
~ *SQL Update - Advanced Technique and TCL*
~ *SQL DELETE and TCL*
~ *SQL Constraints*
~ *SQL Aggregations*
~ *SQL Programmability*
~ *SQL Query Performance*
~ *SQL Xtras*

=> Advance Excel :

~ *Microsoft Excel Fundamentals*
~ *Entering and Editing Text and Formulas*
~ *Working with Basic Excel Functions*
~ *Modifying an Excel Worksheet*
~ *Formatting Data in an Excel Worksheet*
~ *Inserting Images and Shapes into an Excel Worksheet*
~ *Creating Basic Charts in Excel*
~ *Printing an Excel Worksheet*
~ *Working with Excel Templates*
~ *Working with an Excel List*
~ *Excel List Functions*
~ *Excel Data Validation*
~ *Importing and Exporting Data*
~ *Excel PivotTables*
~ *Working with Excel's PowerPivot Tools*
~ *Working with Large Sets of Excel Data*
~ *Conditional Functions*
~ *Lookup Functions*
~ *Text Based Functions*
~ *Auditing an Excel Worksheet*
~ *Protecting Excel Worksheets and Workbooks*
~ *Mastering Excel "What If?"Tools*
~ *Automating Repetitive Tasks in Excel with Macros*
~ *Macro Recorder Tool*
~ *Excel VBA Concepts*
~ *Advance VBA*
~ *Preparing and Cleaning Up Data with VBA*
~ *VBA to Automate Excel Formulas*
~ *Preparing Weekly Report*
~ *Working with Excel VBA User Forms*
~ *Importing Data from Text Files*

=> Tableau :

~ *Talking about Business Intelligence*

~ Tools and Methodlogies used in BI
~ Why Visualization is getting more popular
~ Why Tableau?
~ Gartner Magic Quadrant of Market Leaders
~ Future buisness impact of BI
~ Tableau Products
~ Tableau Architecture
~ BI Project Excecution
~ Tableau Installation in local system
~ Introduction to Tableau Prep
~ Tableau Prep Builder User Interface
~ Data Preparation techniques using Tableau Prep Builder tool
~ How to connect Tableau with different data source
~ Visual Segments
~ Visual Analytics in depth
~ Filters, Parameters & Sets
~ Tableau Calculations using functions
~ Tableau Joins
~ Working with multiple data source (Data Blending)
~ Building Predictive Models
~ Dynamic Dashboards and Stories
~ Sharing your Reports
~ Tableau Server
~ User Security
~ Scheduling
~ PDF File
~ JSON File
~ Spatial File
~ Statistical File
~ Microsoft SQL Server
~ Salesforce
~ AWS
~ Azure
~ Google Analytics
~ R
~ Python
~ Hadoop
~ OneDrive
~ Microsoft Access
~ SAP HANA
~ SharePoint
~ Snowflake
~ Subject
~ Planning
~ Pen & Paper approach
~ Tools
~ Color theme
~ Shapes
~ Fonts
~ Image Selection
~ text position
~ visual placing
~ Story layout & design
~ Dashboard planning

=> Power BI :

~ Power BI introduction and overview
~ Key Benefits of Power BI
~ Power BI Architecture
~ Power BI Process
~ Components of Power BI
~ Power BI - Building Blocks
~ Power BI vs other BI tools
~ Power Installation
~ Overview of Power BI Desktop
~ Data Sources in Power BI Desktop
~ Connecting to a data Sources
~ Query Editor in Power BI
~ Views in Power BI
~ Field Pane
~ Visual Pane
~ Custom Visual Option
~ Filters
~ Introduction to using Excel data in Power BI
~ Exploring live connections to data with Power BI
~ Connecting directly to SQL Azure, HD Spark, SQL Server Analysis Services/ My SQL
~ Import Power View and Power Pivot to Power BI
~ Power BI Publisher for Excel
~ Content packs
~ Introducing Power BI Mobile
~ Power Query Introduction
~ Query Editor Interface
~ Clean and Transform your data with Query Editor
~ Data Type
~ Column Transformations vs Adding Colums
~ Text Transformations
~ Cleaning irregularly formatted data -Transpose
~ Date and Time Calculations
~ Advance editor: Use Case

~ Query Level Parameters
~ Combining Data Merging and Appending
~ Data Modelling
~ Calculated Columns
~ Measures/New Quick Measures
~ Calculated Tables
~ Optimizing Data Models
~ Row Context vs Set Context
~ Cross Filter Direction
~ Manage Data Relationship
~ Why is DAX important?
~ Advanced calculations using Calculate functions
~ DAX queries
~ DAX Parameter Naming
~ Time Intelligence Functions
~ Types of visualization in a Power BI report
~ Custom visualization to a Power BI report
~ Matrixes and tables
~ Getting started with color formatting and axis properties
~ Change how a chart is sorted in a Power BI report
~ Move, resize, and pop out a visualization in a Power BI report
~ Drill down in a visualization in Power BI

=> GPT-3

=> GAN

=> Reinforcement Learning

Project details :-

=> Python Project :

~ Weeding script
~ Image resizing
~ Jupyter notebook merging, reading etc.
~ Sending emails
~ Weather app
~ Memes generator
~ Food log app
~ Web scrapping
~ Web crawlers for image data sentiment analysis and product review sentiment analysis.
~ Integration with web portal.
~ Integration with rest api, web portal and mongo db. on azure
~ Deployment on web portal on azure.
~ Text mining
~ Social media data churn
~ Mass copy, paste

=> Chatbot Projects :

~ Chatbot using Microsoft Luis
~ Chatbot using google dialog flow
~ Chatbot using amazon lex
~ Chatbot using rasa nlu
~ Deployment of Chabot with web , telegram , WhatsApp, skype

=> Major Projects :

~ Healthcare analytics prediction of medicines based on Fitbit band.
~ Revenue forecasting for startups.
~ Prediction of order cancellation at the time of ordering inventories.
~ anomaly detection in inventory packaged material.
~ Fault detection in wafers based on sensor data.
~ Demand forecasting for fmcg product.
~ Threat identification in security system.
~ Defect detection in vehicle engine.
~ Food price forecasting with zomato dataset.
~ Fault detection in wafers based on sensor data.
~ Cement strength reg.
~ Credit card fraud.
~ Forest cover classification.
~ Fraud detection.
~ Income prediction.
~ Mushroom classifier.
~ phishing classifier
~ Thyroid detection.
~ Visibility climate

=> Computer Vision Project :

~ Traffic surveillance system.
~ Object identification.
~ Object tracking.
~ Object classification.
~ Tensorflow object detection.
~ Image to text processing.
~ Speech to speech analysis.
~ Vision based attendance system

=> Mini NLP Project :

~ Machine translation.
~ Abstractive text summarization.
~ Keyword spotting.
~ Language modelling.

~ Document summarization

=> NLP Transfer Learning Project :

~ Deployment and integration with UI machine translation.
~ Question answering (like chat bot)
~ Sentiment analysis imdb.
~ Text search (with synonyms).
~ Text classifications.
~ Spelling corrector.
~ Entity (person, place or brand) recognition.
~ Text summarization.
~ Text similarity (paraphrase).
~ Topic detection.
~ Language identification.
~ Document ranking.
~ Fake news detection
~ Plagiarism checker
~ Text summarization extractive
~ Text summarization abstractive.

=> NLP End to End Project with Architecture and Deployment :

~ Movie review using bert
~ NER using Bert
~ Pos bert
~ Text generation gpt 2
~ Text summarization xlnet
~ Abstract bert
~ Machine translation
~ Nlp text summarization custom
~ Keras/tensorflow
~ Language identification
~ Text classification using fast bert
~ Neuralcore
~ Detecting fake text using gltr with bert and gpt2
~ Fake news detector using gpt2
~ Python plagiarism checker type a message
~ Question answering

=> NLP Project End to End with Deployment in Various Cloud and UI Integration :

~ Topic modeling.
~ Word sense disambiguation
~ Text to speech
~ Keyword spotting
~ Document ranking
~ Text search (with synonyms)
~ Language modeling
~ Spam detector
~ Image captioning

=> SQL Project :

~ Ecommerce Analysis - Tableau Integration
~ Sales Data Analysis - Tableau Integration

=> Tableau Project :

~ Human Resource - Tableau
~ Supply Chain - Tableau
~ Sale Return - Tableau
~ E-Commerce Customer Analysis
~ Project Management Dashbaord
~ Sales Dashboard

=> Power BI Project :

~ Cost Insights - Power BI
~ Management Insights- Power BI
~ Retail Insights- Power BI

IOT

Topic Name : IOT

Sub-topic Name : IOT MASTERS

Course link : https://ineuron.ai/course/IOT

Course Description :-

This course will help you to grab the fundamentals of IOT.

Course Features :-

=> Course material

=> Course resources

=> On demand recorded videos

=> Practical exercises

=> Quizzes

=> Assignments

=> Course completion certificate

What you will learn :-

=> IoT Architecture & Communication Protocols

=> MQTT Introduction

=> MQTT Installation

=> MQTT Pub Sub Test

=> MQTT ACL

=> MQTT ACL username creation

=> MQTT ACL python program

=> RPi4 Sensor Data through MQTT

=> MongoDB Introduction

=> Introduction to Azure IoT Hub

=> Introduction to Azure Storage Account

Requirements :-

=> System with Internet Connection

=> Interest to learn

=> Dedication

Curriculum details :-

=> Course Introduction :

~ Course Introduction

=> IoT Architecture :

~ IoT Architecture & Communication Protocols

=> Introduction to MQTT :

~ MQTT Introduction
~ MQTT Installation
~ MQTT Pub Sub Test
~ MQTT Debugging methods
~ MQTT QoS
~ MQTT sending json file
~ MQTT listener configuration
~ MQTT Security Methods
~ MQTT username password
~ MQTT Client Tools

=> MQTT with Python :

~ MQTT Python Software Development
~ Jupyter notebook hello world
~ Python mqtt libarries
~ Paho mqtt installation
~ Paho mqtt sample test
~ Python simulation data
~ Simuation data program
~ Publish simulation data
~ Subscribe simulation data
~ Username password in python program
~ MQTT ACL
~ MQTT ACL username creation

~ MQTT ACL python program

=> RPi4 Sensor Data through MQTT :

~ Raspberry Pi 4 Introuction
~ Rpi python program for mqtt publish
~ Rpi sensor interfacing
~ Replacement of simulation with actual sensor data

=> MongoDB Introduction :

~ NoSQL databases
~ NoSQL MongoDB Properties
~ MongoDB Installation
~ MongoDB CLI
~ MongoDB Python Library pymongo

=> IoT with Cloud Computing :

~ Cloud Computing and IoT Services

=> Introduction to Azure IoT Hub :

~ Azure IoT Hub Introduction
~ Azure IoT Hub In Depth
~ Your First Azure IoT Device
~ Your First Azure IoT Device Continued
~ D2C Azure Developer Options
~ D2C Python Code
~ Tools for monitoring messages
~ C2D Python code
~ Azure IoT Hub Python SDK

=> Introduction to Azure Storage Account :

~ Azure Storage Account Service Introduction
~ Create blob storage account
~ Saving d2c data in container blob

=> Introduction to X509 Certificates :

~ Introduction to X509 certificates
~ Openssl for working with X509
~ Generating self signed certificate using openssl
~ D2C using Self Signed certificates

Create A Data Pipeline based on Messaging Using PySpark and Airflow

Topic Name : BIG DATA

Sub-topic Name : BIG DATA PROJECTS

Course link : https://ineuron.ai/course/Create-A-Data-Pipeline-based-on-Messaging-Using-PySpark-and-Airflow

Course Description :-

In this Project, we will learn how to Build a Big Data pipeline on AWS at scale. You will be using the Covid-19 dataset. This will be streamed in real time from an external API using NiFi. The complex JSON data will be parsed into CSV format using NiFi and the result will be stored in HDFS. Then this data will be sent to Kafka for data processing using PySpark. The processed data will then be consumed from Spark and stored in HDFS. Then a Hive external table is created on top of HDFS. Finally the cleaned, transformed data is stored in the data lake and deployed. Visualization is then done using Tableau and AWS QuickSight.

Course Features :-

=> Do Everything In Industry Grade Lab

=> Learn As Per Your Timeline

=> Hands-On Industry Real-Time Projects.

=> Self Paced Learning

=> Dashboard Access

What you will learn :-

=> Real Time Projects

=> Create A Data Pipeline based on Messaging Using PySpark and Airflow

=> Build End to End Datapipeline

=> How to Extract Streaming Data into NFFI

=> Data Encryption

=> Data processing using pyspark

=> Build Dashboards

Requirements :-

=> System with minimum i3 processor or better

=> At least 4 GB of RAM

=> Working internet connection

=> Dedication to learn

Instructors :-

=> MD Imran :

~ Working as Data Scientist with experience in solving real world business problems across different domains.

Curriculum details :-

=> Welcome to the Course :

~ Course Overview
~ Dashboard Introduction

=> Project :- Create A Data Pipeline based on Messaging Using PySpark and Airflow :

~ Introduction of Instructor
~ Introduction to Data Pipeline
~ What is Data Engineering
~ Project Overview
~ End Notes
~ Problem Description
~ Understand the application scope
~ Tour to existing solution
~ End Notes
~ Data Infrastructure: Components used
~ Nifi
~ Hdfs
~ Kafka
~ Hive
~ Airflow
~ Pyspark
~ Aws services
~ Data Visualization Tools
~ End Notes
~ Solution Description
~ Data Architecture
~ Tour to Architecture diagram

~ Cost Involved
~ End Notes
~ system Requirements
~ Create EC2 Instance
~ SSH into EC2 Instance
~ Envirnoment setup with docker
~ Copy Important folder from local to ec2 and give required permissions
~ To connect to different services locally after port forwarding
~ To get into bash shell of different containers
~ Data Extraction with Nifi
~ Data encryption parsing
~ Data sources hdfs kafka
~ streaming data from kafka to pyspark
~ pyspark streaming output kafka nifi hdfs
~ Move Data HDFS to hive Table
~ Dataflow Orchestration with Airflow
~ Connecting with Data Visualization Tool
~ Building Dahbaord and Report
~ End Notes
~ Conclude the project
~ Assignments & External Resources

Complete Bootstrap - 5 Projects

Topic Name : WEB DEVELOPEMENT

Sub-topic Name : BOOTSTRAP

Course link : https://ineuron.ai/course/Complete-Bootstrap---5-Projects

Course Description :-

This course will take you from having no prior knowledge of Bootstrap to mastering all of the utilities, components, widgets, and grids, as well as designing real-world themes and websites. This project-oriented course does not need prior knowledge of Bootstrap. Upon successful completion of this course, you will be able to build responsive and interactive websites and beautiful static pages using the bootstrap framework. So hurry up and enrol now to start a successful career as a front-end web developer.

Course Features :-

=> Course material

=> Course resources

=> On demand recorded videos

=> Practical exercises

=> Quizzes

=> Assignments

=> Course completion certificate

What you will learn :-

=> Bootstrap Integration and typography

=> Buttons, breakpoints and utilities

=> Team pages

=> Navbars

=> Flexboxes

=> Forms

=> Modals

=> Custom cards

Requirements :-

=> System with minimum i3 processor or better

=> At least 4 GB of RAM

=> Working internet connection

=> Dedication to learn

Instructors :-

=> Hitesh Choudhary :

~ I like to make videos related to code and tech in my free time. I also lead a few tech teams in startups, help in hiring talent for companies. I am also on a part time traveller, with 31 countries checked off so far!

Curriculum details :-

=> Getting started with bootstrap :

~ Introduction to Bootstrap4
~ Tools to be used in this course
~ File structure for learning
~ Emmet quick start part 1
~ Emmet quick start part 2

=> Bootstrap integration and typography :

~ Bootstrap integration
~ Bootstrap typography basics
~ Bootstrap typography for testimonials
~ Embed responsive YouTube videos

=> Video Landing Page :

~ Getting assets and preparing html
~ Beautiful landing page
~ Customized fonts

=> Buttons Breakpoints and utilities :

~ Get started with bootstrap buttons
~ Button size and backgrounds
~ Border utilities in Bootstrap
~ Grid system basics in Bootstrap

~ Mobile first concept of bootstrap
~ Breakpoints in grid

=> Project team-page :

~ Getting assets and basic setup of project
~ Logo and display utilities
~ Heading section
~ Team person one content
~ Custom styling for team section
~ Some fix and assignments

=> Navbar, flexbox, forms and modals :

~ Get started with navs
~ Flexbox utilities
~ Nav panels and assignment
~ Basics of navibars
~ Togglers and colors in navbars
~ Forms in bootstrap
~ input groups in Bootstrap
~ Modals in bootstrap

=> Project- App launch website :

~ Device mockups
~ Getting resources
~ Navbar part 1
~ center menu of navbar
~ Customized navbars
~ Login Modal
~ Feature section with custom font
~ Background svg image
~ Device mockups usage
~ Subscription form customization
~ App store icons
~ app store CSS
~ Building feature section
~ feature column section
~ Customized CSS for features
~ fixing bugs and gradients
~ Just fun - unplanned video

=> Project - Build 4 Custom Cards :

~ Introduction to cards
~ Introduction to cards part 2
~ Downloading project 4 files
~ preparing HTML for Card 1
~ Card 1 custom CSS part 1
~ Card 1 custom CSS part 2 and assignment
~ preparing HTML for Card 2
~ Card 2 custom CSS
~ preparing HTML for Card 3
~ Card 3 custom CSS part 1
~ Custom CSS for card 3 - part 2
~ Custom CSS for card 3 - part 3
~ preparing HTML for Card 4
~ Custom CSS for card 4

=> Bonus sign-up page :

~ Download project 5 files
~ Preparing our HTML
~ CSS for background image
~ Purple Styling of buttons
~ Adding colors to buttons
~ Fixing custom forms
~ Fixing errors and media queries

Data Analysis Using Python

Topic Name : K12

Sub-topic Name : CLASS10

Course link : https://ineuron.ai/course/Data-Analysis-Using-Python

Course Description :-

In this course, you will learn to extract insights from the data. This course is designed to help you deal with data analysis and data manipulation using the popular python library Pandas. You will learn powerful functions to present the facts from data in the most straightforward and accurate way.

Course Features :-

=> Online Instructor-led learning

=> Practical Implementation

=> Integrate academic knowledge with the tech

=> Real-time Project

=> Live Class Recording

=> One to One Doubt Clearing

=> Assignment in all the Module

=> Quiz in every Module

=> Career Counselling

=> Completion Certificate

What you will learn :-

=> Introduction to Data Analysis

=> Importance of Data

=> Integrated development environment

=> Python Packages

=> Python Libraries

=> File Formats

=> Pandas Library

=> Data Cleaning

=> Data Manipulation

=> Pandas Functions

=> Feature engineering

Requirements :-

=> Interest to learn

=> Dedication

=> System with good internet connection

Curriculum details :-

=> Introduction to the Course :

~ Course Introduction
~ Who is this course for?
~ Course overview & course outcome
~ What is Data? How data will be collected?
~ Why Data is important?
~ What is DataFrame?
~ Why DataFrame is used?
~ What is Analysis?
~ Why Analysis is used?
~ What is Data Analysis?
~ Why Data Analysis is used?

=> Assignment 1 :

~ Is it possible to create and innovate things without data?

=> System setup :

~ What is IDE?
~ Why IDE is used?
~ Advantages of using an IDE?
~ Google Colab

=> PyPI :

~ What is PyPI?
~ What is pip?
~ Installing your first library using pip

=> Packages :

~ What is a Package?
~ How to install Python Packages

=> Library :

~ What is a library?
~ What is the difference between package and library?

=> Open Source :

~ What do you mean by open-source community?
~ What is an open-source package or a library?
~ Why is it important to do open-source contribution

=> File Formats :

~ What is a file?
~ What are the types of files?
~ .csv
~ .txt
~ .json
~ .xlsx

=> Pandas :

~ What is pandas library?
~ Alternatives of pandas
~ Why pandas use ?

=> Cleaning Data Using Pandas :

~ What is Data cleaning?
~ Why it is necessary to perform Data cleaning?
~ Performing Data cleaning using pandas
~ Removing unnecessary columns in the DataFrame
~ Skipping unnecessary rows in a CSV file
~ Changing the index of a DataFrame.
~ Renaming columns to a more recognizable set of labels.

=> Pandas Functions :

~ What do you mean by functions?
~ What are Pandas functions?
~ Important Pandas functions
~ Practical: read_csv()
~ Practical: head()
~ Practical: describe()
~ Practical: memory_usage()
~ Practical: astype()
~ Practical: loc[:]
~ Practical: value_counts()
~ Practical: groupby()

=> Assignment 2 :

~ Download any dataset of your choice and try to apply these pandas functions on your own.
~ Try to find out more functions in pandas and try to implement them.

=> Feature Engineering :

~ What do you mean by feature?
~ What is Feature Engineering?
~ What do you mean by Feature Transformations?
~ Practical: Transforming columns into the same scale
~ What do you mean by Feature Extraction?
~ Practical: Extracting year from your birthdate
~ What do you mean by Feature selection?
~ Practical: selecting the important features from the dataset

=> Project :

~ Take any dataset and perform data analysis using pandas

=> Course Summary :

~ Course outro
~ Future learning path
~ Order by clause

Write quicker HTML5 and CSS 3; productivity hacks with emmet4

Topic Name : WEB DEVELOPEMENT

Sub-topic Name : HTML

Course link : https://ineuron.ai/course/Write-quicker-HTML5-and-CSS-3;-productivity-hacks-with-emmet4

Course Description :-

This course will help you to grab the fundamentals of emmet when using HTML5 and CSS3.

Course Features :-

=> Course material

=> Course resources

=> On demand recorded videos

=> Practical exercises

=> Quizzes

=> Assignments

=> Course completion certificate

What you will learn :-

=> Getting started with emmet

=> Ememet and speedy html

=> Parent child and grouping

=> emmet in css

=> An old style blog

=> Why DOM is important

=> Inline vs Block and bring in images

=> Lists and interlinking pages

=> Getting a video on service page

=> 3 Plans in a table

=> GET and POST forms

=> Types of input forms

=> Secret to learn CSS

Requirements :-

=> System with Internet Connection

=> Interest to learn

=> Dedication

Instructors :-

=> Hitesh Choudhary :

~ I like to make videos related to code and tech in my free time. I also lead a few tech teams in startups, help in hiring talent for companies. I am also on a part time traveller, with 31 countries checked off so far!

Curriculum details :-

=> We do not write without emmet :

~ Getting started with emmet
~ Ememet and speedy html
~ Parent child and grouping
~ emmet in css

=> HTML and DOM :

~ An old style blog
~ Why DOM is important
~ Inline vs Block and bring in images
~ Lists and interlinking pages
~ Getting a video on service page
~ 3 Plans in a table
~ GET and POST forms
~ Types of input forms

=> Starting with CSS :

~ Secret to learn CSS
~ Explore and bring in fonts
~ Bring in colors and styles
~ Transition and box shadow DOCS

~ Margin and padding
~ Button gets all and assignment

Data Science Industry Ready Projects

Topic Name : DATA SCIENCE

Sub-topic Name : MACHINE LEARNING INTERVIEW

Course link : https://ineuron.ai/course/Data-Science-Industry-Ready-Projects

Course Description :-

Ready to use end-to-end data science projects for real-world business use cases. We will be discussing projects from very scratch such as understanding problem statements, capturing requirements, and various aspects of project design using different documentation such as High-Level Design, Low-Level Desing, and Architecture Design. Practical use of MLOPS practices using tools such as MLFLOW, Wandb. Pipeline implementation for training, retraining, and inferencing. Designing dashboard to present important KPIs to monitor system and model performance and generate alert to notify the appropriate parties to address serious problems if it is about to occur.

Course Features :-

=> Online Instructor-led learning

=> Doubt Clearing

=> Proper Roadmap for building AI projects

=> Lifetime Dashboard access

=> Recording of Live Class

=> Material

=> Interview Questions

=> Resume Building

=> Career Guidance

=> Quiz in every module - Based on Real Time Questions

=> Certificate

=> Industry Level Projects and Case studies

=> Capstone Projects

What you will learn :-

=> System Architecture

=> High Level Design

=> Component Selection

=> Low Level Design

=> Core utility deisgn

=> Deployment Architecture

=> Mutistage pipeline for CI/CD

=> ML Pipeline Understanding

=> Training Pipeline Implementation

=> Inference Pipeline Implementation

=> Retraining Pipeline Implementation

=> Deployment of ML Pipeline on Cloud

=> Monitoring of System and Model Performance

Requirements :-

=> System with Internet Connection

=> Interest to learn

=> Dedication

=> Knowledge of Python

=> Knowledge of Machine Learning

Instructors :-

=> krish naik :

~ Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

=> Sudhanshu Kumar :

~ Having 8+ years of experience in Big data, Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

=> Avnish Yadav :

~ 3+ years of experience in various domains such as data scientist, data analyst, database developer, and .net developer. Implemented various sophisticated business requirements, performed an analysis of various data to capture insights and hidden patterns. Fine and tuned various regression and classification-based algorithms for prediction. Implemented various ETL pipelines to fulfil the business requirement. Automated various machine learning pipelines such as data loading, data cleaning, data validation, model selection, model tuning, and model monitoring pipeline. Implemented machine learning pipeline in azure machine learning studio. I have a keen interest to solve complicated machine learning problems to fulfil business requirements.

=> Ketan Gangal :

~ I have worked in data science for more than two years, and I have a track record of successfully implementing data science pipelines in production withpractical expertise using ML-Ops, deep learning& machine learning. I alsoLove sequence Processing because it is deeply inspired by humans as our feeling, thoughts, emotions, sensations, language are sequential in nature if we can enable machine to understandsequence of information and act accordingly we can make significant progress towards true artificial intelligence.

Curriculum details :-

=> Project - Sensor Fault Detection :

~ Project Introduction
~ Project Business Use case
~ System Architecture
~ High Level Design
~ Component Selection
~ Low Level Design
~ Core utility deisgn
~ Deployment Architecture
~ Mutistage pipeline for CI/CD
~ Technology Stack
~ Python, Pandas, Sklearn, Mlflow, Cloud, Prometheus and Grafana, Docker, RDBMS, Cloud Storage, Flask, Git,GitHub
~ ML Pipeline Understanding
~ Type of ML Pipeline
~ Training Pipeline
~ Inferencing Pipeline
~ Retraining Pipeline
~ Training Pipeline Implementation
~ Introduction to Training Pipeline
~ Data Ingestion From Data Source
~ Data Validation
~ EDA, Data Preprocessing, Feature Engineering Model Selection
~ Customize Model Training
~ Model Training, Selection and Hyperparameter Tuning
~ Model Analysis and Evaluation
~ Model Push/ Export
~ Inference Pipeline Implementation
~ Introduction to Inference Pipeline
~ Understanding of the use of Artifact Generated by Training Pipeline
~ Data Validation
~ Data Preprocessing and Feature Engineering
~ Prediction using preprocessed data
~ Retraining Pipeline Implementation
~ Introduction to Retraining Pipeline
~ Model Analysis and Performance Monitoring of Prediction Pipeline
~ Creating Trigger to Initiate Model Retraining
~ Deployment of ML Pipeline on Cloud
~ Schedule and Orchestrate Training Pipeline
~ Deployment of Inference Pipeline as an API
~ Deployment of Retraining Pipeline
~ Monitoring of System and Model Performance
~ Importance of Monitoring
~ Visualization of KPI and Other Indicator
~ System and Model Performance Visualization
~ Implementation of Alert and Notification to prevent Failure
~ Project Conclusion

=> Project - Financial Product Complaint :

~ Project Introduction
~ Project Business Use case
~ System Architecture
~ High Level Design
~ Component Selection
~ Low Level Design
~ Core utility deisgn
~ Deployment Architecture
~ Mutistage pipeline for CI/CD
~ Technology Stack
~ Python, Pytorch,Cloud, Prometheus and Grafana, Docker, RDBMS, Cloud Storage, Flask, Git,GitHub
~ ML Pipeline Understanding
~ Type of ML Pipeline
~ Training Pipeline
~ Inferencing Pipeline
~ Retraining Pipeline
~ Training Pipeline Implementation
~ Introduction to Training Pipeline
~ Data Ingestion From Data Source
~ Data Validation
~ EDA, Data Preprocessing, Feature Engineering Model Selection
~ Model Training, Selection and Hyperparameter Tuning
~ Model Analysis and Evaluation

~ Model Push/ Export
~ Inference Pipeline Implementation
~ Introduction to Inference Pipeline
~ Understanding of the use of Artifact Generated by Training Pipeline
~ Data Validation
~ Data Preprocessing and Feature Engineering
~ Prediction using preprocessed data
~ Retraining Pipeline Implementation
~ Introduction to Retraining Pipeline
~ Model Analysis and Performance Monitoring of Prediction Pipeline
~ Creating Trigger to Initiate Model Retraining
~ Deployment of ML Pipeline on Cloud
~ Schedule and Orchestrate Training Pipeline
~ Deployment of Inference Pipeline as an API on Elastic Container Serving
~ Deployment of Retraining Pipeline
~ Monitoring of System and Model Performance
~ Importance of Monitoring
~ Visualization of KPI and Other Indicator
~ System and Model Performance Visualization
~ Implementation of Alert and Notification to prevent Failure
~ Project Conclusion

=> Project - Face Authenticator :

~ Project Introduction
~ Project Business Use case
~ System Architecture
~ High Level Design
~ Component Selection
~ Low Level Design
~ Core utility deisgn
~ Deployment Architecture
~ Mutistage pipeline for CI/CD
~ Technology Stack
~ Python, MongoDB, Deepface, Flask, Docker, EC2 Instance, Git, Github, SQL
~ Face Authenticator Pipeline
~ Understanding Face Authenticator mechanism
~ Face Registration Pipeline
~ Face Indentification Pipeline
~ Face Registration Pipeline
~ Capturing Images of a Person
~ Generating Embedding of Facial Image
~ Save Embeddding in Database
~ Face Identification Pipeline
~ Detecting face of a Person at login portal
~ Generate embedding of captured face
~ Search Generated Embedding in DB using simillarity metrics Triplet Loss
~ Monitoring of System and Model Performance
~ Importance of Monitoring
~ Visualization of KPI and Other Indicator
~ System and Model Performance Visualization
~ Implementation of Alert and Notification to prevent Failure
~ Project Conclusion

=> Project - Embedding based search engine :

~ Project Introduction
~ Project Business Use case
~ System Architecture
~ High Level Design
~ Component Selection
~ Low Level Design
~ Core utility deisgn
~ Deployment Architecture
~ Mutistage pipeline for CI/CD
~ Technology Stack
~ Python,Pytorch, Hugging Face, Transformer, Prometheus and Grafana, Docker, RDBMS, Cloud Storage, Flask, Git,GitHub
~ ML Pipeline Understanding
~ Type of ML Pipeline
~ Training Pipeline
~ Inferencing Pipeline
~ Retraining Pipeline
~ Training Pipeline Implementation
~ Introduction to Training Pipeline
~ Data Ingestion From Data Source
~ Data Validation
~ EDA, Data Preprocessing, Feature Engineering Model Selection
~ Model Training, Selection and Hyperparameter Tuning
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~ Model Push/ Export
~ Inference Pipeline Implementation
~ Introduction to Inference Pipeline
~ Understanding of the use of Artifact Generated by Training Pipeline
~ Data Validation
~ Data Preprocessing and Feature Engineering
~ Prediction using preprocessed data
~ Retraining Pipeline Implementation
~ Introduction to Retraining Pipeline
~ Model Analysis and Performance Monitoring of Prediction Pipeline
~ Creating Trigger to Initiate Model Retraining
~ Deployment of ML Pipeline on Cloud

~ Schedule and Orchestrate Training Pipeline
~ Deployment of Inference Pipeline as an API
~ Deployment of Retraining Pipeline
~ Monitoring of System and Model Performance
~ Importance of Monitoring
~ Visualization of KPI and Other Indicator
~ System and Model Performance Visualization
~ Implementation of Alert and Notification to prevent Failure
~ Project Conclusion

=> Project - AI Based Hybrid Recommender System :

~ Project Introduction
~ Project Business Use case
~ System Architecture
~ High Level Design
~ Component Selection
~ Low Level Design
~ Core utility design
~ Deployment Architecture
~ Multistage pipeline for CI/CD
~ Technology Stack
~ Python,Pytorch, Transformer, Prometheus and Grafana, Docker, RDBMS, Cloud Storage, Flask, Git,GitHub, Microsoft library
~ ML Pipeline Understanding
~ Type of ML Pipeline
~ Training Pipeline
~ Inferencing Pipeline
~ Retraining Pipeline
~ Training Pipeline Implementation
~ Introduction to Training Pipeline
~ Data Ingestion From Data Source
~ Data Validation
~ EDA, Data Preprocessing, Feature Engineering Model Selection
~ Model Training, Selection and Hyperparameter Tuning
~ Model Analysis and Evaluation
~ Model Push/ Export
~ Inference Pipeline Implementation
~ Introduction to Inference Pipeline
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~ Data Preprocessing and Feature Engineering
~ Prediction using preprocessed data
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~ Introduction to Retraining Pipeline
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~ Importance of Monitoring
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Pro Aptitude - Operating Systems

Topic Name : APTITUDE

Sub-topic Name : APTITUDE

Course link : https://ineuron.ai/course/Pro-Aptitude---Operating-Systems

Course Description :-

This course is designed mostly for computer science subject OPERATING SYSTEM test takers.

Course Features :-

=> Quizzes

=> Course completion certificate

What you will learn :-

=> OS Theoritical Test

=> OS Practical Test

=> OS Aptitude Test

Requirements :-

=> System with minimum i3 processor or better

=> At least 4 GB of RAM

=> Working internet connection

=> Dedication to solve

Curriculum details :-

=> Operating System Test :

~ Operating System Test 1
~ Operating System Test 2
~ Operating System Test 3
~ Operating System Test 4