

# Deep Learning With Computer Vision and Advanced NLP

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Topic Name : DATA SCIENCE

Sub-topic Name : DEEP LEARNING

Course link : <https://ineuron.ai/course/Deep-Learning-With-Computer-Vision-and-Advanced-NLP>

## Course Description :-

Deep Learning is a subfield of machine learning concerned with algorithms inspired by the structure and function of the brain called artificial neural networks. It is a function that imitates the workings of the human brain in processing data and creating patterns for use in decision making. Learn Deep Learning, Transfer Learning and Neural Networks using the latest frameworks. Become a Deep Learning Guru!

## Course Features :-

- => Deep Learning
- => Natural Language processing
- => Computer Vision
- => Course Certificate
- => One to One Resume Discussion
- => Doubt Clearing session
- => Email Support
- => All 7 Days in a week Skype Support
- => Career Guidance

## What you will learn :-

- => Advance NLP with deep-learning overview.
- => TensorFlow Installation.
- => Pytorch.
- => Neural Network.
- => CNN overview
- => Advance Computer Vision Part 1.
- => Advance computer Vision Part 2.
- => ChatBot.
- => Text processing
- => Spacy.
- => NLP terminology.
- => RNN
- => Attention Based model.
- => Hardware Setup GPU.
- => Transfer Learning in NLP.
- => Mini NLP Project.
- => Deployment of Model and Performance tuning.
- => NLP Transfer learning project with deployment and integration with UI.
- => NLP end to end project with architecture and deployment.
- => NLP project end to end with deployment in various cloud and UI integration.
- => Computer Vision Project.

## Requirements :-

- => Dedication
- => Computer with i3 processor and internet

## 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.

## Curriculum details :-

=> Introduction

=> Advance NLP with deep-learning overview :

- ~ *Computational Linguistic*
- ~ *History of NLP*
- ~ *Why NLP*
- ~ *Use of NLP*

=> TensorFlow Installation :

- ~ *Tensorflow Installation 2.0*
- ~ *Tensorflow Installation 1.6 with virtual environment*
- ~ *TensorFlow 2.0 function*
- ~ *Tensorflow 2.0 neural network creation*
- ~ *Tensorflow 1.6 functions*
- ~ *Tensorflow 1.6 neural network and its functions*
- ~ *Keras Introduction*
- ~ *Keras in-depth with neural network creation*
- ~ *Mini project in Tensorflow*

=> Pytorch :

- ~ *Pytorch installation*
- ~ *Pyrotorch functional overview*
- ~ *Pytorch neural network creation*

=> Neural Network :

- ~ *A Simple Perception Preview*
- ~ *Neural Network overview and its use case Preview*
- ~ *Various Neural Network architect overview*
- ~ *Use case of Neural Network in NLP and computer vision*
- ~ *Multilayer Network*
- ~ *Loss Functions*
- ~ *The Learning Mechanism*
- ~ *Optimizers*
- ~ *Forward and Backward Propagation*
- ~ *Gradient Descent*

=> CNN overview :

- ~ *CNN definition and various CNN based architecture*
- ~ *End to End CNN network training*
- ~ *Deployment in Azure*
- ~ *Cloud performance tuning of CNN network*

=> Advance Computer Vision Part 1. :

- ~ *GAN*
- ~ *Generative Model Using GAN*
- ~ *BERT*
- ~ *Semi-Supervised learning using GAN*
- ~ *Restricted Boltzmann Machine (RBM) and Autocoders*
- ~ *CNN Architectures*
- ~ *LeNet-5*
- ~ *AlexNet*
- ~ *GoogleNet*
- ~ *VGGNet*
- ~ *ResNet*
- ~ *SSD*
- ~ *SSD lite*
- ~ *Faster R CNN*

=> Advance computer Vision Part 2. :

- ~ *SCNN*
- ~ *Masked R-CNN*
- ~ *Xception*
- ~ *SENet*
- ~ *Facenet*
- ~ *Implementing a ResNet 34 CNN using Keras*
- ~ *Pretrained Models from Keras*
- ~ *Pretrained Models for Transfer Learning*

=> ChatBot :

- ~ *Intents and Entities*
- ~ *Fulfillment and integration*
- ~ *Chatbot using Microsoft bot builder and LUIS, development to Telegram, Skype*
- ~ *Chatbot using Microsoft bot builder and LUIS, development to Telegram, Skype*
- ~ *Chatbot using Amazon Lex, deployment to Telegram, Skype*
- ~ *Chatbot using RASA NLU, deployment to Telegram , Skype*
- ~ *Semantic Segmentation*
- ~ *Classification and Localisation*
- ~ *TensorFlow Object Detection*
- ~ *You Only Look Once (YOLO)*

=> Text processing :

- ~ *Importing Text*
- ~ *Web Scrapping*
- ~ *Text Processing*
- ~ *Understanding Regex*
- ~ *Text Normalisation*
- ~ *Word Count*
- ~ *Frequency Distribution*
- ~ *Text Annotation*

- ~ Use of Anotator
- ~ 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 entity Recognition, interpolation, Language models

=> NLP terminology :

- ~ Morphology and Diversity
- ~ Ambiguity and Paradigms
- ~ Structures and meanings
- ~ Lexical Knowledge, Network Metaphors and co-references
- ~ Lexical Ambiguity
- ~ Polysemy and homonymy
- ~ Coreference Resolution
- ~ Anaphora and cataphora resolution
- ~ Multi-sentential resolution
- ~ Humans and Ambiguity
- ~ Machines and ambiguity
- ~ Co-occurrence and distributional similarity
- ~ Similarity and relatedness
- ~ Knowledge graphs and repositories
- ~ Computational Linguistics
- ~ Word embeddings and co-occurrence vectors
- ~ Word Sim353 Dataset examples
- ~ Word2vec
- ~ Part of speech tagging

=> RNN :

- ~ Recurrent Neural Networks
- ~ Long Short Term Memory (LSTM)
- ~ Bi LSTM
- ~ GRU implementation
- ~ Building a Story writer using character level RNN

=> Attention Based model :

- ~ Seq 2 Seq
- ~ Encoders and Decoders
- ~ Attention Mechanism
- ~ Attention Neural Networks
- ~ Self Attention

=> Hardware Setup GPU :

- ~ GPU Introduction
- ~ Various type of GPU configuration
- ~ GPU provider and its pricing
- ~ Paperspace GPU setup
- ~ Running model in GPU

=> Transfer Learning in NLP :

- ~ Introduction to transformers
- ~ BERT Model
- ~ ELMo Model
- ~ GPT1 Model
- ~ GPT2 Model
- ~ ALBERT Model
- ~ DistilBERT Model

## Project details :-

=> 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

=> Mini NLP project :

- ~ Machine Translation
- ~ Abstractive text summarization
- ~ Keyword spotting
- ~ Language modelling
- ~ Document summarization

=> 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

=> 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

=> 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

# Digital Marketing and Youtube Niche Foundations

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Topic Name : DIGITAL MARKETING

Sub-topic Name : DIGITAL MARKETING MASTERS

Course link : <https://ineuron.ai/course/Digital-Marketing-and-Youtube-Niche-Foundations>

## Course Description :-

May I will tell you in the coming 15th class on YouTube how you can use YouTube and digital marketing, You will be able to do your youtube and Digital Marketing and you will make good career in this filed, this will be a free program of 15 days. on youtube we make creators YouTube channel

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => How to find your niche
- => Youtube related Q&A
- => Social media Q&A
- => Facebook ads
- => Think About Your Interests and Passions
- => Solve Problems For Your Audience
- => Why You Want To Select This Niche
- => Carry Out Competitor Analysis
- => Choose a Niche That Gives You The Most YouTube Views.
- => Check Out the Competition for Your Niche
- => Do Keyword Research
- => Assess your Niche
- => Find your Unique Selling Point
- => Test your Idea
- => How to start monetize your skills

## Requirements :-

- => System with Internet Connection
- => Interest to learn
- => Dedication

## Instructors :-

=> Amresh Bharti :

~ Amresh Bharati is an inspiring entrepreneurial figure, Digitalised marketing & startup growth consultant, renowned YouTube personality, Online branding expert, highly stimulating coach, former teacher, video marketing trainer, online earning & kick startup trainer, author, Josh talk speaker and among one of the most leading digital entrepreneurs of todays time. this is Mahatmaji Technical website to learn Digital Marketing

## Curriculum details :-

- => How to find your niche :
  - ~ How to find your niche
  - ~ Youtube related Q&A
  - ~ Social media Q&A
  - ~ Facebook ads
  - ~ Think About Your Interests and Passions
  - ~ Solve Problems For Your Audience
  - ~ Why You Want To Select This Niche
  - ~ Carry Out Competitor Analysis
  - ~ Choose a Niche That Gives You The Most YouTube Views.
  - ~ Check Out the Competition for Your Niche
  - ~ Do Keyword Research
  - ~ Assess your Niche

- ~ *Find your Unique Selling Point*
- ~ *Test your Idea*
- ~ *How to start monetize your skills*

# Mastering DSA with Python

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Topic Name : DATA STRUCTURE

Sub-topic Name : DSA WITH PYTHON

Course link : <https://ineuron.ai/course/Mastering-DSA-with-Python>

## Course Description :-

This Python course on Data Structures and Algorithms covers data structures such as linked lists, stacks and queues, binary search trees, heaps, searching, and hashing. This course covers a variety of sorting algorithms, as well as their implementation and analysis. The following topics are covered with Python implementation in this Data Structures in Python course. Analysis of Algorithms, Big O notation, Time Complexity, Singly Linked List, Doubly linked list, Trees, Heaps, Hashing and Sorting algorithms.

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => Problem Solving
- => Data Structure Introduction
- => Recursion in depth
- => Linked List in depth
- => Circular Linked List in Depth
- => Doubly Linked List in Depth
- => Stack and Queue
- => Binary Search Tree
- => Hashing
- => AVL Tree
- => HEAP
- => Sorting algorithms

## 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 :-

- => Introduction to DSA :
  - ~ Why we need Data structures and algorithms
  - ~ Time based approach
  - ~ Concept of Big O and graphs
  - ~ Data Structures and Algorithms HB
- => Problem Solving :
  - ~ Start with a challenge - reverse string
  - ~ Reverse a string - solution
  - ~ Interview approach to solve a problem
  - ~ Classic interview steps for DSA problems
- => Data Structure Introduction :
  - ~ Memory process - Stack and Heap
  - ~ Physical and logical data structures
  - ~ Abstract Data Types - ADT
- => Recursion in depth :

- ~ Introduction to recursion
- ~ Tracing the recursion tree
- ~ Trace tree assignment
- ~ Trace tree solution
- ~ Types of Recursion
- ~ Complex recursion tree
- ~ What is Factorial
- ~ Factorial program in Python
- ~ Fibonacci series THEORY
- ~ Fibonacci series and its version Python Code
- ~ What is Power Program
- ~ Power Program Python code
- ~ What is a Combination Program
- ~ Combination Program Python code
- ~ Classic Tower of Hanoi problem
- ~ Classic Tower of Hanoi Python code

#### => Linked List in depth :

- ~ Introduction to Linked List
- ~ Add value in linked list - cases
- ~ Push Append and insert in LinkedList - Python code
- ~ Deletion of linked list THEORY.
- ~ Deletion in linked list Python code
- ~ Delete complete linked list Python code
- ~ Count all nodes in linkedlistPython code
- ~ Reversing a linked list THEORY
- ~ Reversing a linked list Python code

#### => Circular Linked List in Depth :

- ~ Circular linked list THEORY
- ~ Circular Linked List push Python code
- ~ Traverse a circular linked list Python code
- ~ Deletion in circular linked list Python code
- ~ count nodes in circular linked list Python code
- ~ convert linked list to circular linked list Python code

#### => Doubly Linked List in Depth :

- ~ Theory for doubly linked list
- ~ Doubly linked list push Python code
- ~ Insert After in doubly linked list Python code
- ~ add to last in doubly linked list Python code
- ~ Traverse a doubly linked list Python code
- ~ Deleting a node in doubly linked list Python code

#### => Stack and Queue :

- ~ Stack - Push and Pop operation THEORY
- ~ Stack operations with Python code
- ~ Queue concept THEORY
- ~ Queue implementation in Python code
- ~ Circular queue THEORY
- ~ Circular queue Python code

#### => Binary Search Tree :

- ~ What is Binary Search tree and creation THEORY update
- ~ Insertion and Deletion in BST THEORY
- ~ InOrder Traversal of BST THEORY
- ~ Pre Order traversal in BST THEORY
- ~ Post order traversal in BST THEORY
- ~ Creating a Binary Search tree Python code
- ~ Insertion in BST Python code
- ~ deletion of key in BST Python code
- ~ inorder preorder and postorder traversal in BSTPython code

#### => Hashing :

- ~ What is Hashing THEORY
- ~ Hash chaining with linked list
- ~ Linear Hash Shifting
- ~ Square hash shifting

#### => AVL Tree :

- ~ What is AVL tree and height
- ~ Finding balance factor
- ~ Left Left and Right Right Rotation in AVL Tree
- ~ LR and RL rotation with 1 trick
- ~ Creating a AVL tree - Important
- ~ Deletion in AVL Tree.

#### => HEAP :

- ~ Heap - Max and min Heap
- ~ Insertion and deletion in HEAP

#### => Sorting algorithms :

- ~ Categories of sorts
- ~ Selection sort - Theory
- ~ Selection sort - Python Code
- ~ Bubble Sort - Theory
- ~ Bubble Sort - Python Code
- ~ Insertion sort - Theory
- ~ Insertion sort - Python Code
- ~ Quick Sort - Theory
- ~ Quick Sort - Theory part 2



- ~ Quick Sort - Python Code
- ~ Counting Sort - Theory
- ~ Merge Sort Theory
- ~ Merge sort Python code
- ~ Counting Sort - Python Code

# Youtube Mastery Course in Hindi Tech Neuron

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Topic Name : DIGITAL MARKETING

Sub-topic Name : YOUTUBE MARKETING

Course link : <https://ineuron.ai/course/Youtube-Mastery-Course-in-Hindi-Tech-Neuron>

## Course Description :-

Video Mastery Course Is To Learn About How You can Work On Youtube And Grow Your channel To earn money through your videos, you will have to have a Google AdSense account. Dont have a Google AdSense account? You are able to create a new Google AdSense account with your YouTube channel.

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => Creating Your Videos Content
- => Useful Apps for Youtubers
- => Kinemaster Expert
- => Photoshop Graphic Designing
- => Youtube Short Videos
- => Filmora
- => Canva
- => INSTAGRAM
- => Photoshop Graphic Designing
- => FACEBOOK

## Requirements :-

- => System with Internet Connection
- => Interest to learn
- => Dedication

## Curriculum details :-

- => Why YouTube As a platform & How Youtube Works? :
  - ~ What is YouTube and how to earn through it?
  - ~ What is Amazon Affiliate Through Youtube?
  - ~ Youtube as a profession and business
  - ~ Sponsorship through Youtube & another Multiple way of learning
- => Channel Creation and Learn Seo Identify your Target Audience :
  - ~ Creating Youtube Channel
  - ~ How to Verify your Youtube Channel and apply custom Thumbnail?
  - ~ Decide Your Unique name of YouTube Channel
  - ~ Making Professional Channel Art
  - ~ How To Make Your Channel Brand New Logo?
  - ~ Complete Youtube Creators Studio
  - ~ Youtube A to Z Complete Step by Step Settings
  - ~ How To Upload Youtube Video With 100% SEO?
  - ~ Best Mic For Your Video & How To Use it
  - ~ Best Camera for Video
  - ~ How To Decide Your Profitable Niche?
- => Creating Your Videos Content :
  - ~ How To Write an Effective Script for your videos?
  - ~ How do the best creators produce content consistently?
  - ~ well-researched and steadily consistent videos
  - ~ Learn the secrets of high-quality channel
- => Important Websites & Tools for Youtube :
  - ~ How to get Copyright free videos and IMAGES?
  - ~ Learning to use Google Fonts
  - ~ Using Google Ads to promote Youtube Videos

- ~ Complete tutorial of Social Blade, TubeBuddy tutorial, VidIQ tutorial
- ~ Creative Commons Licence

#### => Useful Apps for Youtubers :

- ~ Best Video Editing App
- ~ Best Audio Editing App
- ~ Best Screen Recorder App
- ~ Youtube Video Analytics
- ~ Best Tag Finder For Youtube Video
- ~ Lower Third For Youtube Video
- ~ How To Make Professional Thumbnail for Your Youtube Video?
- ~ How To Make Professional Intro or Outro For YOUTUBE Video?
- ~ TubeBuddy For Tags

#### => Free Youtube Video, Audio etc. :

- ~ Download Audacity software ,install and use it
- ~ Type of Mic
- ~ YouTube Equipment Setup
- ~ How to set Chroma Properly

#### => 50 Niche for Youtube Channel One To One Session With Youtube Growth Expert :

- ~ Teaching
- ~ Elementary class
- ~ Middle class
- ~ High School
- ~ Professional Skills-
- ~ Cooking,
- ~ Yoga
- ~ Sales
- ~ Marketing
- ~ Startups
- ~ Digital Marketing
- ~ Affiliate Marketing
- ~ Fitness Channels
- ~ Product Fit Without Gym
- ~ Comedy Channels
- ~ Vines
- ~ Group
- ~ Unboxing Videos
- ~ Bollywood Gossip Video
- ~ Sports Video
- ~ Fashion
- ~ Mens
- ~ Womens
- ~ Music and music tutorial channel
- ~ Food Challenges
- ~ Vlogs channel
- ~ Timelapse channel
- ~ Copy Paste channel
- ~ Interviews channel
- ~ Property channel
- ~ Facts Video - Day to Day
- ~ Life Hacks
- ~ Beauty product video
- ~ Product Comparison
- ~ Video Editing channel
- ~ Graphic Designing channel
- ~ Film Your Podcast
- ~ Give Business Advice
- ~ Hair Tutorial channel
- ~ Clothes Tips channel
- ~ Health Fruits channel
- ~ New Channel-Shot Film
- ~ Food Vlogging channel
- ~ Startup news-biopic
- ~ Case Studies
- ~ Charts/Graphs
- ~ Ebooks reader
- ~ Cartoons/Illustrations
- ~ Book Summaries
- ~ Tool Reviews
- ~ Online earning application review channel
- ~ Share market
- ~ Personal finance
- ~ Infographics
- ~ Mind Maps
- ~ Online Game
- ~ Podcasts
- ~ Quotes
- ~ Quizzes
- ~ Cricket News Channel
- ~ Cricket Prediction
- ~ Baby Care Channel

#### => Youtube Short Videos :

- ~ Understand Youtube Shorts Algorithm
- ~ Youtube Shorts Video Uploading
- ~ How To Shoot & Edit Youtube Shorts Videos?
- ~ How To Upload Youtube Shorts Video?
- ~ Youtube Shorts Video Complete 100% Seo

=> Get 1000 subscribers in 90 days and many more tips :

- ~ *How to get 1000 subscribers and 4000 hours watch time in 2022?*
- ~ *Rank as no. 1 Youtuber- Youtube seo step by step tutorial*
- ~ *Making videos trending in less views*
- ~ *Becoming digital business growth consultant*
- ~ *Engaging people in youtube channels*
- ~ *How to Increase watch time?*
- ~ *Starting from 0 subscribers*
- ~ *Why youtubers fail to accomplish?*

=> Pre Production Work Editing From Mobile Apps Power Director :

- ~ *Power Director Tutorial*
- ~ *Power Director Tutorial part 1*
- ~ *Power Director Tutorial part 2*

=> Kinemaster Expert :

- ~ *Basic of Kinemaster Expert*
- ~ *Important Setting of Kinemaster Expert*
- ~ *Learning Text Tool in Kinemaster Expert*
- ~ *Use transition Tool in Kinemaster Expert*
- ~ *Learning to use Pan and Zoom in Kinemaster Expert*
- ~ *Remove Green Screen in Kinemaster Expert*
- ~ *Learning to Save Video in High Quality*
- ~ *How to add Subscribers button in Channel?*
- ~ *How to use colour filters and adjustment tools?*
- ~ *How to make 3D Mockup book?*
- ~ *Kinemaster Latest update explained 720p*
- ~ *Editing Transitional type video 1080 p*
- ~ *Tutorial of Biography Channel*
- ~ *Kinemaster Latest update 5.0.0*
- ~ *Learning to animated videos like GIGL and Seeken*
- ~ *Learning to make pdf and slideshow in mobile*
- ~ *Recording and editing educational videos*
- ~ *Learning to import and export Kinemaster Video*
- ~ *Learning to edit Chroma Video in mobile phone*
- ~ *Audio Settings in Kinemaster*
- ~ *Learn to change video speed in Kinemaster*
- ~ *How to do Voiceover in Kinemaster?*
- ~ *Learn to make scrolling text*
- ~ *How to use Keyframe Animation Tool and Handwriting Tool in Kinemaster?*
- ~ *How to use Sticker Tool in Kinemaster?*

=> Editing Through Laptop Filmora Tutorial :

- ~ *Overview*
- ~ *Begin your Video Editing Journey with Filmora*
- ~ *How to download and install Filmora X?*
- ~ *Selection of Aspect Ratio*
- ~ *Overview of Filmora X Interface*
- ~ *Add and Adjust Background Music*
- ~ *Speed up and Slow down Video*
- ~ *Adding multiple video at single screen*

=> Functions of Filmora X :

- ~ *How to add text and filters?*
- ~ *How add filters?*
- ~ *Adding Transitions between videos*
- ~ *Adding own logo*
- ~ *How to crop video?*
- ~ *How to use pan and zoom tool?*
- ~ *Removing green screen*
- ~ *How to use Keyframing?*

=> Filmora Advance Lust pack and colour grading :

- ~ *How to use colour matching?*
- ~ *Learn to colour grade Video*

=> Filmora Advance Tutorials :

- ~ *How to add scrolling text?*
- ~ *Learn to blur face in video*
- ~ *Learning to screen record in Filmora X*

=> FilmoraGo App Tutorials :

- ~ *FilmoraGo App Tutorials*

=> Whiteboard Animation Video Tutorial :

- ~ *How to make Animated Video on Android?*
- ~ *Make Animation Video through Mobile Phone*
- ~ *Learn to script for Animation video*
- ~ *Learn to script for Animation video*
- ~ *How to make Animation Video Full Tutorial?*
- ~ *How to make cartoon tutorial?*

=> Make Thumbnail Like Successful Youtubers :

- ~ *How To Make Professional Thumbnail?*
- ~ *How To Make Attractive & Eye Catchy Thumbnail?*
- ~ *How To make Clickbait Thumbnails?*

=> Canva Complete Tutorial :

- ~ *Canva Complete Tutorial*

=> Youtube Advance Class Session { Live Sessions } With Famous Youtuber :

- ~ *How To Complete 1000 Subscribers & 4000 Hour Watch Time In 90 Days?*
- ~ *Google Adsense Complete Process Setup & Detailed Class*
- ~ *How To Grow 10x Your Youtube Channel?*
- ~ *Always Rank On Top Your Video*
- ~ *How To Compete With Your Competitor?*

#### **=> FACEBOOK :**

- ~ *Facebook related niche*
- ~ *Monetization policy*
- ~ *Types of niche on facebook*
- ~ *How to make money through facebook?*
- ~ *How To Create & Optimize A Facebook Page?*
- ~ *What Kind of Facebook Page Do You Want To Create?*
- ~ *Top 5 SEO Tips For Your Facebook Page*
- ~ *What Makes Your Facebook Page Awesome?*
- ~ *How To Create A Facebook Group For Your Business?*

#### **=> INSTAGRAM :**

- ~ *How to create Instagram Account?*
- ~ *How to find niche for Instagram Account?*
- ~ *How to make money through Instagram?*
- ~ *How To Get 1000 Followers In 50 Days?*
- ~ *Which Niche Has More Money?*
- ~ *Personal Branding Instagram Page*
- ~ *Types of Account on Instagram*
- ~ *How to make instagram reels?*
- ~ *How to set up your Instagram profile Basic To Advance?*
- ~ *How to convert your personal profile to business creator one?*

#### **=> Photoshop Graphic Designing :**

- ~ *Introduction & Workspace*
- ~ *Photoshop All Tools In Detail*
- ~ *Advance Editing In Photoshop*
- ~ *How To Create Mockups?*
- ~ *How To Create Best Quality Thumbnails?*
- ~ *Logo Designing & Channel art*

# Complete Excel Course

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Topic Name : DATA ANALYTICS

Sub-topic Name : EXCEL

Course link : <https://ineuron.ai/course/Complete-Excel-Course>

## Course Description :-

Excel is perhaps the most widely used spreadsheet on personal computers. It's simple to use for a variety of computations and comes with a Data Analysis Tool Pack and a collection of statistical tools. So, if you suddenly find yourself looking to undertake some statistical analysis, you may choose to start using Excel. So, in this course, you will study all there is to know about Excel, from the fundamentals to advanced topics, and you will have a thorough knowledge of its power and how to use it for data analysis and other applications.

## Course Features :-

- => Course Materials
- => Self Paced Learning
- => Lifetime Dashboard Access
- => Completion Certificate

## What you will learn :-

- => String functions on Excel
- => Mathematical functions on Excel
- => Logical & error functions on Excel
- => Excel formatting
- => Custom formatting
- => Conditional formatting
- => Charts in Excel
- => Data analysis using Excel
- => Pivot tables
- => Dashboarding in Excel

## Requirements :-

- => System with minimum i3 processor or better
- => At least 4 GB of RAM
- => Working internet connection
- => Dedication to learn

## Instructors :-

=> Dr Nishtha Jain :

*~ I am a doctor by profession but a teacher by passion. I have been into the teaching profession for the last 3 years. I have been and am still a mentor for various courses which include technical as well as non-technical ones. These include MS-Excel, Tableau, Computer basics, Biology, English, etc. I love to learn, explore and share my knowledge to whatever extent possible. Being an ardent educator, I have always helped all my students and will continue to do the same.*

## Curriculum details :-

=> Microsoft Office in Brief :

- ~ Microsoft account creation
- ~ MS Office installation
- ~ Office Web version and Microsoft 365 free trial

=> What, Why and How of Excel :

- ~ MS Excel and why to use it
- ~ Use cases of excel in companies
- ~ Basic tasks in Excel

=> MS Excel Introduction and UI :

- ~ MS Excel Introduction
- ~ User interface or Parts of Excel, Part 1
- ~ User interface or Parts of Excel, Part 2

=> Working on Rows and Columns :

- ~ Inserting and Deleting Rows, Columns, and Cells
- ~ Hide Unhide rows and columns, Modify column and row size, Freeze and Unfreeze

=> Editing and customizing data :

- ~ Editing data and customizing it
- ~ Cut, Copy, Paste, Redo, Undo

- ~ *Clipboard, Split panes*
- => Paste special :
  - ~ *Use Paste Special, Part 1*
  - ~ *Use Paste Special, Part 2*
- => Working on worksheets :
  - ~ *Working on worksheets*
- => Basic formulas and functions :
  - ~ *Basic Formulas in Excel*
  - ~ *Basic functions in Excel*
- => Find, Select, Replace, Go to :
  - ~ *Find and Select*
  - ~ *Go to, Go to Special*
  - ~ *Find and Replace*
- => Filling, Copying :
  - ~ *FILL types in Excel*
  - ~ *Copying formulas without changing the cell references*
- => Cell referencing :
  - ~ *Absolute, mixed and relative cell referencing*
- => Subtotal :
  - ~ *Subtotal*
- => Text functions :
  - ~ *Text Functions, Part 1*
  - ~ *ROUND functions*
  - ~ *Text functions, Part 2*
  - ~ *Text functions, Part 3*
- => Logical or Comparative Operators :
  - ~ *Logical or Comparative Operators*
- => Text operations :
  - ~ *Text to columns, Part 1*
  - ~ *Text to columns, Part 2*
  - ~ *Textsplit function*
  - ~ *Textbefore function*
  - ~ *Textafter functions*
- => IF and IFs functions :
  - ~ *How to use IF function*
  - ~ *Some IF functions*
  - ~ *IFs functions*
- => Database Functions :
  - ~ *Database Functions*
- => Logical functions :
  - ~ *Logical functions along with IF function*
- => Speak cells, Show formulas :
  - ~ *Show and Hide formulas, Speak cells*
- => Basic unconditional formatting in Excel :
  - ~ *Basic unconditional formatting in Excel*
- => Protection in Excel :
  - ~ *Protecting Cells and Worksheets*
  - ~ *Protecting files and Workbooks*
- => Formula auditing :
  - ~ *Formula Auditing, Part 1*
  - ~ *Formula Auditing, Part 2*
- => Naming, Sorting and Filtering :
  - ~ *Naming Ranges*
  - ~ *Basic Sorting and Filtering*
  - ~ *Advanced Sorting and Filtering*
- => Tables in Excel :
  - ~ *Tables in Excel, Part 1*
  - ~ *Tables in Excel, Part 2*
- => Printing :
  - ~ *Printing, Part 1*
  - ~ *Printing, Part 2*
- => Data Validation and Dropdown :
  - ~ *Data Validation, Part 1*
  - ~ *Data Validation, Part 2*
- => Index, Match :
  - ~ *Index and Match functions*
- => LOOKUP in Excel :
  - ~ *HLOOKUP*
  - ~ *VLOOKUP*
  - ~ *Lookup*
  - ~ *XLOOKUP*
  - ~ *Lookup*

=> Conditional Formatting :

- ~ *Conditional formatting, Part 1*
- ~ *Conditional Formatting*

=> Date and Time Functions :

- ~ *Date and Time Functions*

=> Pivot Tables in Excel :

- ~ *Pivot Table, Part 1*
- ~ *Pivot table, Part 2*

=> Charts in Excel :

- ~ *Charts in Excel, Part 1*
- ~ *Charts in Excel, Part 2*
- ~ *Charts in Excel, Part 3*
- ~ *Charts in Excel, Part 4*

=> Excel Power Query :

- ~ *Power Query in Excel Part 1*
- ~ *Power query in Excel, Part 2*
- ~ *Power Query in Excel, Part 3*

=> Excel Dashboarding :

- ~ *Dashboard in Excel*



# Job Guaranteed Big Data Bootcamp

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Topic Name : BIG DATA

Sub-topic Name : BIG DATA MASTERS

Course link : <https://ineuron.ai/course/Job-Guaranteed-Big-Data-Bootcamp>

## Course Description :-

By using the tools and processes that big data scientists and engineers use on a daily basis, you will be intelligent enough to understand the insights that big data may offer. With a general understanding of how large data is arranged, examined, and evaluated, you can make better business judgments. This unique industry program will help to learn the entire stack of Big Data and be ready to crack jobs in leading organizations.

## Course Features :-

- => High Quality Premium Big Data Labs Included
- => Full stack Big Data certification
- => Job guarantee otherwise refund
- => One year of internship Anytime
- => 1:1 Personalized Mentorship
- => Revision Classes
- => Online Instructor-led learning: Live teaching by instructors
- => 20 + hands-on industry real-time projects.
- => 200 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 :-

- => High Quality Premium Big Data Labs Included
- => Big Data
- => Hadoop
- => HDFS
- => YARN
- => Linux
- => AWS EC2
- => AWS IAM
- => AWS S3
- => AWS SNS
- => AWS DMS
- => AWS RDS
- => AWS Redshift
- => Hbase
- => Sqoop
- => Confluent

- => Atlas
- => Ambari
- => Databricks

## Requirements :-

- => Premium Big Data Labs Included
- => System with Internet Connection
- => Interest to learn
- => Dedication

## Instructors :-

=> 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.

=> Shashank Mishra :

~ Experienced Data Engineer with a demonstrated history of working in service and product companies. Solved data mysteries for different domains like Aviation, Pharmaceutical, FinTech, Telecom and Employee Services. Have designed scalable & optimized data pipelines to handle PetaBytes of data, with Batch & Real Time frequency. Got good exposure on different BigData frameworks (Hadoop, Spark, Hive, Sqoop, Flume, Flink, Kafka, Docker), Databases (MySQL, HBase, Cassandra, Redshift, Elastic Search), AWS Services (S3, Lambda, EMR, Glue, Cloudwatch, Redshift, SNS, SQS, Athena, Appflow), Dashboarding Tools (Grafana, Kibana, QuickSight, DataDog, Data Studio), Monitoring Tools (Airflow, Azkaban), Web Development (HTML, CSS, Scala Play, Django, Rest API, JavaScript, Ajax, JQuery), Good command over programming languages (Python, Java, Scala, Shell Scripting) and strong Data Structures & Algorithm fundamentals.

## Curriculum details :-

=> Big Data Introduction: Introduction :

- ~ What is Big Data?
- ~ Evolution of Big Data
- ~ Why to learn Big Data technologies?
- ~ Examples of Big Data
- ~ Who is using Big Data?
- ~ Why is Data so important?
- ~ Characteristics of Big Data
- ~ Challenges of Big Data
- ~ Data scale
- ~ Manage, store and process Big Data
- ~ 5 Vs of Big Data
- ~ Sources of Data flood
- ~ Exploding data problem
- ~ OLTP and OLAP
- ~ Operational vs Analytical Big Data
- ~ Possible solutions: scaling up vs. scaling out
- ~ Challenges of scaling up and scaling out

=> Hadoop fundamentals :

- ~ What is Hadoop?
- ~ Hadoop in layman's term
- ~ History and timeline of Hadoop
- ~ Evolutionary features of Hadoop
- ~ Why hadoop in demand?
- ~ Components of Hadoop ecosystem
- ~ Hadoop architecture
- ~ How hadoop solve data explosion problem?
- ~ Differences between Hadoop 1.X and Hadoop 2.X and Hadoop 3.X
- ~ Hadoop 1.x 2.x 3.x architecture, components and working of those Components

=> HDFS :

- ~ Design of HDFS
- ~ HDFS architecture
- ~ HDFS features
- ~ Name node and data node
- ~ Secondary name node
- ~ Job tracker
- ~ Task tracker
- ~ Client nodes
- ~ Explain master-slaves
- ~ Pseudo-distributed
- ~ Fully-distributed
- ~ Data replication
- ~ How does a file read and write work?
- ~ Local file system and HDFS
- ~ Rack awareness
- ~ Arrangement of racks
- ~ Arrangement of machines and racks
- ~ Checkpointing in Hadoop
- ~ Benefits of replica placement and rack awareness
- ~ URL And URN
- ~ HDFS commands
- ~ HDFS web interface
- ~ Fault tolerance
- ~ Name node failure management
- ~ Anatomy of file read and write from HDFS
- ~ Important java classes to write data to HDFS

- ~ Inputsplit and data blocks difference
- ~ Why Is the block size 128 MB?
- ~ Recordreader
- ~ Inputformat
- ~ Default Inputformat: TextInputformat
- ~ Outputformat
- ~ What is partitioner?
- ~ Using partitioner
- ~ Map only job
- ~ Flow of operations in MapReduce
- ~ Serialization in MapReduce

#### => HDFS Operations :

- ~ Start HDFS
- ~ Listing files in HDFS
- ~ Writing a file into HDFS
- ~ Reading data from HDFS
- ~ Shutting down HDFS
- ~ Listing contents of directory
- ~ Displaying and printing disk usage
- ~ Moving files & directories
- ~ Copying files and directories
- ~ Displaying file contents

#### => YARN :

- ~ What is Yarn?
- ~ Why Yarn?
- ~ Classic MapReduce v/s Yarn
- ~ Yarn architecture
- ~ Resource Manager
- ~ Node manager
- ~ Application master
- ~ Node manager containers
- ~ Resource manager components
- ~ Advantages & disadvantages of Yarn
- ~ Yarn applications
- ~ Scheduling in Yarn
- ~ Fair Scheduler
- ~ Fault Tolerance
- ~ Schedulers in Yarn
- ~ FIFO scheduler
- ~ Capacity scheduler
- ~ Fair scheduler

#### => Setting up Our Linux Space :

- ~ Downloading necessary tools
- ~ Installing Ubuntu in Windows
- ~ What is SSH?
- ~ Install SSH Clients
- ~ Setting up SSH in Ubuntu VM
- ~ How to do SSH to your Ubuntu VM?
- ~ Setting Up Passwordless SSH

#### => Linux Commands :

- ~ Linux Commands Part1
- ~ Linux Commands Part2
- ~ Linux Commands Part3
- ~ Linux Commands Part4
- ~ Cat Command Usages

#### => Introduction :

- ~ What is Hive?
- ~ Hive Vs Map Reduce
- ~ Hive Vs Relational databases
- ~ Installation and setup of Hive
- ~ Introduction to CouchDB
- ~ Why CouchDB?
- ~ History of CouchDB
- ~ Features of CouchDB
- ~ Advantages of CouchDB
- ~ Disadvantages of CouchDB
- ~ What is Neo4j?
- ~ Why Neo4j?
- ~ Features of Neo4j
- ~ Advantages of Neo4j
- ~ Neo4j Architecture
- ~ Applications of Neo4j
- ~ Data model of Neo4j
- ~ Building Blocks of Neo4j

#### => Hive Architecture :

- ~ Hive architecture
- ~ Different modes of Hive
- ~ Hive Functions: Built-in & UDF
- ~ Datatypes in Hive
- ~ Operators in Hive
- ~ How to create and drop databases?
- ~ Hive create table: internal table, external table, alter, drop

#### => DDL and DML commands in Hive :

- ~ Hive DDL

- ~ Create
- ~ Show
- ~ Describe
- ~ Use
- ~ Drop
- ~ Alter
- ~ Truncate
- ~ Hive DML
- ~ Load
- ~ Select
- ~ Insert
- ~ Delete
- ~ Update
- ~ Export
- ~ Import
- ~ Hive view and index
- ~ What is Hive metastore?
- ~ How to install and configure Hive metastore?
- ~ What is Hive data modeling?

=> Hive partitioning and bucketing :

- ~ Partitioning in Hive
- ~ Static and dynamic partitioning
- ~ Bucketing in Hive
- ~ Bucketing vs Partitioning
- ~ What is Hive query language(HQL)?

=> HQL language :

- ~ HiveQL- Where
- ~ HiveQL- Order By
- ~ HiveQL- Group By
- ~ HiveQL- Joins and types
- ~ HiveQL- SubQuery
- ~ Hive ETL: loading JSON, XML, text data
- ~ Working with arrays
- ~ Sort by and order by
- ~ Distribute by and cluster by
- ~ Bucket-map join
- ~ Sort-Merge-Bucket-Map join
- ~ Left semi join

=> Different File formats in Hive :

- ~ File formats in Hive
- ~ Text files
- ~ Input formats in Hive
- ~ Sequence files in Hive
- ~ RC file in Hive
- ~ Sequencefile
- ~ ORC files in Hive
- ~ Avro files
- ~ Parquet file
- ~ Inline index in ORC files
- ~ ORC file configurations in Hive
- ~ SerDe in Hive
- ~ Demo: CSVSerDe
- ~ JSONSerDe
- ~ RegexSerDe
- ~ Analytic and windowing in Hive
- ~ Demo: analytics.hql
- ~ Hcatalog in Hive
- ~ Demo: using\_HCatalog
- ~ Accessing Hive with JDBC
- ~ Demo: HiveQueries.Java
- ~ HiveServer2 and beeline
- ~ Demo: beeline
- ~ Demo: ToUpper.Java and working\_with\_UDF
- ~ Optimizations in Hive
- ~ Demo: Optimizations

=> Introduction of HBase :

- ~ What is HBase?
- ~ HDFS and HBase
- ~ HBase vs RDBMS
- ~ HBase vs HIVE
- ~ HBase storage mechanism
- ~ Feature of HBase
- ~ Applications of HBase

=> HBase installation setup :

- ~ Apache HBase setup
- ~ Hardware recommendations
- ~ Software recommendations
- ~ Installation using cloudera manager
- ~ Basic static configuration

=> HBase architecture :

- ~ Architecture of HBase
- ~ Components of HBase architecture
- ~ Client library
- ~ Zookeeper

- ~ HMaster server
- ~ HBase regions servers

=> HBase commands :

- ~ General commands
- ~ status
- ~ table\_help
- ~ version
- ~ whoami
- ~ Data definition commands
- ~ alter
- ~ alter\_async
- ~ alter\_status
- ~ create
- ~ drop
- ~ drop\_all
- ~ enable
- ~ enable\_all
- ~ exists
- ~ get\_table
- ~ is\_disabled
- ~ is\_enabled
- ~ show\_filters
- ~ Data manipulation commands
- ~ append
- ~ count
- ~ delete
- ~ deleteall
- ~ get\_table
- ~ get\_counter
- ~ put
- ~ truncate
- ~ truncate\_preserve
- ~ Other HBase shell commands
- ~ Admin commands
- ~ Replication commands
- ~ Snapshot commands
- ~ Visibility labels commands
- ~ Security commands

=> CRUD operations using HBase shell :

- ~ What is HBase shell?
- ~ HBase shell usage
- ~ Starting HBase shell
- ~ Creating table
- ~ Inserting a row
- ~ Updating a row
- ~ Retrieving a row
- ~ Retrieving a range of rows
- ~ Deleting a row
- ~ Deleting a table
- ~ Retrieve rows within a time range
- ~ Filter by column value - SingleColumnValueFilter
- ~ Filter by Row id - RowFilter
- ~ Apply multiple conditions - Filterlist

=> Understanding the troubleshooting in HBase :

- ~ Understand the troubleshooting
- ~ Trouble shooting distributed clusters
- ~ Administration from the command line
- ~ How to use the HBase UI?
- ~ How to use the Metrics and the logs?

=> Basic Introduction :

- ~ Challenges with traditional RDBMS
- ~ What is Nosql database?
- ~ History behind the creation of Nosql databases
- ~ Features of Nosql database
- ~ Different types of Nosql databases
- ~ When Nosql should be used?
- ~ Advantages of Nosql
- ~ Disadvantages of Nosql
- ~ Why Nosql database?

=> Introduction and overview of cassandra :

- ~ What is Apache Cassandra?
- ~ History of Cassandra
- ~ Cassandra Database vs Relational Database
- ~ Apache Cassandra features
- ~ Cassandra use cases and applications
- ~ Advantages of Cassandra
- ~ Disadvantages of Cassandra

=> Setup, installtion and configuration :

- ~ Cassandra configuration with datastax
- ~ Understanding different ways to communicate with cassandra
- ~ Using cqlsh

=> Cassandra Architecture :

- ~ Cassandra architecture
- ~ Cassandra data model

- ~ *Cassandra as a distributed database*
- ~ *Node*
- ~ *Data center*
- ~ *Cluster*
- ~ *Commit log*
- ~ *Mem-table*
- ~ *SSTable*
- ~ *Data replication*
- ~ *Write operation*
- ~ *Read operation*
- ~ *Data compaction*

#### => Cassandra - Shell Commands :

- ~ *Help*
- ~ *Capture*
- ~ *Consistency*
- ~ *Copy*
- ~ *Describe tabel*
- ~ *Describe keyspaces*
- ~ *Expand*
- ~ *Exit*
- ~ *Show*
- ~ *Source*

#### => Cassandra Query Language(CQL) :

- ~ *CQL Data Definition Commands*
- ~ *Cassandra CQL Data Types*
- ~ *Creating Database*
- ~ *Creating Keyspace*
- ~ *Use Keyspace*
- ~ *Alter Keyspace*
- ~ *Drop Keyspace*
- ~ *Create Table*
- ~ *Alter table*
- ~ *Drop table*
- ~ *Truncate*
- ~ *Create Index*
- ~ *Drop Index*
- ~ *CQL Data Manipulation Commands*
- ~ *Insert*
- ~ *Update*
- ~ *Delete*
- ~ *Batch*
- ~ *CQL Clauses*
- ~ *Select*
- ~ *Cassandra Where Clause*
- ~ *Cassandra Order by Clause*

#### => Cassandra CRUD Operation :

- ~ *Create data*
- ~ *Update data*
- ~ *Read data*
- ~ *Delete data*
- ~ *Maps*
- ~ *Sets*
- ~ *Lists*
- ~ *Key and indexing*

#### => Introduction to MongoDB :

- ~ *Introduction*
- ~ *key charcristic of MongoDB*
- ~ *Understanding MongoDB ecosystem*
- ~ *Advantages & disadvantages of using MongoDB*

#### => MongoDB installtion and setup :

- ~ *MongoDB installation in local*
- ~ *Setup MongoDB server*
- ~ *Setup MongoDB compass*
- ~ *Exploring the MongoDB compass*
- ~ *MondoDB local server and compass setup*
- ~ *MongoDB atlas setup*

#### => Architecture :

- ~ *Architecture of MongoDB*
- ~ *Understanding databases, collections & documents*
- ~ *Creating databases & collections*
- ~ *Understanding JSON Data*
- ~ *Comparing JSON & BSON*
- ~ *Storage engines*
- ~ *Read path*
- ~ *Write path*
- ~ *Working set*
- ~ *Capped collection*
- ~ *Oplog collection*
- ~ *TTL index*
- ~ *Gridfs*

#### => CRUD opearations :

- ~ *MongoDB data types*
- ~ *Finding, Inserting, Deleting & Updating elements*
- ~ *Querying the documents*

- ~ Bulk insert operations
- ~ Updating multiple document
- ~ Limiting documents
- ~ Understanding insertOne vs insertMany()
- ~ Updateone() vs updateMany()
- ~ Understanding find() & fetchall()
- ~ Understanding "deleteOne()" & "deleteMany()"
- ~ Filtering documents

=> Schema design and data modeling :

- ~ Why do we use Schemas?
- ~ What is data modeling?
- ~ RDBMS and MongoDB data modeling difference
- ~ Embedding document
- ~ Reference document
- ~ Structuring documents
- ~ Understanding relations
- ~ One To One
- ~ One To Many
- ~ Many To Many

=> Database administration in MongoDB :

- ~ Database status
- ~ Troubleshooting issues
- ~ Current operations
- ~ Rotating log files
- ~ Users and roles
- ~ Copy and clone database
- ~ DB and collection stats
- ~ Explain plan
- ~ Profiling
- ~ Changing configuration files
- ~ Upgrading the database

=> Working with python driver :

- ~ Splitting work between the Driver & the Shell
- ~ Preparing our project
- ~ Installing Visual Studio Code or Pycharm
- ~ Installing the Python
- ~ Connecting Python & the MongoDB cluster
- ~ Storing products in the database
- ~ Fetching data from the database
- ~ Getting a single product
- ~ Editing & deleting products
- ~ Implementing pagination
- ~ Adding an index
- ~ Adding an index to make the Email unique
- ~ Adding user sign-in

=> Replication in MongoDB :

- ~ Concept of replication
- ~ Replicaset member roles
- ~ Voting and electing primary
- ~ Role of oplog in replication
- ~ Read and write concern
- ~ Arbiter, Hidden and Delayed replica node
- ~ Priority settings
- ~ Replicaset nodes health check
- ~ Concept of resyncing the nodes
- ~ Rollbacks during failover
- ~ Keyfile authentication

=> MongoDB scalability :

- ~ Concept of scalability
- ~ Sharding concept
- ~ Shardkey and chunks
- ~ Choosing shardkey
- ~ Sharding components
- ~ Types of sharding
- ~ Balanced data distribution
- ~ Sharded and non-sharded collection
- ~ Sharded replicaset
- ~ Tag aware sharding

=> MongoDB Monitoring :

- ~ MMS manager
- ~ Ops manager
- ~ MongoDB utility commands
- ~ MongoDB developer tools
- ~ MongoDB client drivers

=> Installation :

- ~ Installation of CouchDB on Windows
- ~ Installation of CouchDB on Ubuntu

=> Neo4j CQL :

- ~ Introduction to Neo4j CQL
- ~ Neo4j CQL clauses
- ~ Neo4j CQL Functions
- ~ Neo4j CQL Data Types
- ~ Neo4j CQL operators

- ~ *Neo4j CQL Boolean operators*
- ~ *Neo4j CQL Comparison operators*
- ~ *Node Creation in Neo4j CQL*
- ~ *Relationship creation in Neo4j CQL*

#### => Introduction to Kafka :

- ~ *Introduction to Apache Kafka*
- ~ *History of Apache Kafka*
- ~ *Why Apache Kafka?*
- ~ *What is messaging system?*
- ~ *Kafka message flow*
- ~ *Committed vs uncommitted messages*
- ~ *Kafka operations*
- ~ *Kafka communication*
- ~ *Advantages of Kafka*
- ~ *Kafka use-cases*

#### => Architecture of kafka :

- ~ *Kafka architecture*

#### => Installation of kafka :

- ~ *Installation of Kafka in local system*
- ~ *kafka setup on cloud*
- ~ *Kafka - Confluent*
- ~ *Kafka - Confluent platform*

#### => Kafka CLI :

- ~ *Introduction to Kafka CLI*
- ~ *Creating Kafka topic*
- ~ *Listing topics in Kafka CLI*
- ~ *Deleting topics in Kafka CLI*
- ~ *Getting details of Kafka topic*
- ~ *Producing data to Kafka topic*
- ~ *Consuming data to Kafka topic*
- ~ *Purging a Kafka topic*

#### => Zookeeper in Kafka :

- ~ *Why Zookeeper is used in Kafka?*
- ~ *Role of Zookeeper in Kafka*

#### => Kafka APIs :

- ~ *Introduction to Kafka API*
- ~ *Different types of Kafka API*
- ~ *Producer API*
- ~ *Consumer API*
- ~ *Streams API*
- ~ *Connector API*
- ~ *Kafka integration with Spark*

#### => Introduction to Nifi :

- ~ *What is Apache NiFi?*
- ~ *Architecture of Apache NiFi*
- ~ *Characteristics of Apache NiFi*
- ~ *Advantages of Apache NiFi*

#### => Installation of Apache NiFi :

- ~ *Environment Setup*
- ~ *Setting up Windows Developer Environment*
- ~ *Setting up Linux Developer Environment*
- ~ *Setting up Mac Developer Environment*

#### => Apache NiFi Repository :

- ~ *Flowfile Repository*
- ~ *Content Repository*
- ~ *Provenance Repository*

#### => Apache NiFi User Interface :

- ~ *Introduction to Apache NiFi User Interface*
- ~ *NiFi Canvas*
- ~ *NiFi Processors*
- ~ *Process Groups and Templates*
- ~ *Apache NiFi components*

#### => Apache NiFi Processors :

- ~ *Introduction to Apache NiFi Processors*
- ~ *GenerateFlowFile*
- ~ *LogAttribute*
- ~ *Functionality of NiFi Processors*

#### => Getting started with Spark :

- ~ *What is Spark and what it is purpose?*
- ~ *Why Spark is faster than Hadoop?*
- ~ *What is in-memory computation?*
- ~ *Features of Spark*
- ~ *Explain unified architecture of Spark*
- ~ *Components of the Spark unified architecture*
- ~ *Downloading and installing Spark standalone*
- ~ *Scala and Python overview, launching and using Sparks Scala and Python shell*
- ~ *Spark execution context*
- ~ *Driver*
- ~ *Executor*
- ~ *Master*



~ Worker

## => The Resilient Distributed Datasets (RDD) :

- ~ Overview of RDD's
- ~ Features of RDD
- ~ RDD operations
- ~ RDD and pair RDDs and RDD performance
- ~ Flat maps and filters
- ~ Data loading in RDD
- ~ RDD deep dive
- ~ Partitions
- ~ Dependencies
- ~ Transformation in RDD
- ~ Action in RDD
- ~ Map
- ~ Filter
- ~ Filter map
- ~ Group by
- ~ Group by key
- ~ Reduce by key
- ~ Map partitions
- ~ Union
- ~ Join
- ~ Distinct
- ~ Coalesce
- ~ Key by
- ~ Partition by
- ~ Zip
- ~ Collect
- ~ Reduce by key
- ~ Aggregate
- ~ RDD Lineage
- ~ DAG for RDD
- ~ Limitations of Spark RDD
- ~ RDD persistence
- ~ Shared variables and broadcast variables
- ~ Accumulators

## => Spark SQL, DataFrames and Datasets :

- ~ Introducing Spark SQL
- ~ Introducing datasets and DataFrame
- ~ Data sources
- ~ Distributed SQL engine
- ~ Creating DataFrame
- ~ DataFrame operations
- ~ DataFrame from csv
- ~ DataFrame from db tables
- ~ DataFrame from hive NoSQL tabel
- ~ DataFrame from json
- ~ DataFrame from RDD
- ~ Different operations on DataFrame
- ~ Filter
- ~ Join
- ~ Group
- ~ Aggregation
- ~ Having
- ~ Where
- ~ User define function(UDF)
- ~ Grouping aggregation
- ~ Multiple grouping
- ~ More aggregation
- ~ Hash aggregation
- ~ Spark SQL vs RDD
- ~ Executing SQL commands and SQL-style functions on a DataFrame
- ~ Using DataFrames instead of RDD's
- ~ Different operations with dataframes with DataFrames
- ~ Word Count with DataFrames
- ~ DataFrames vs RDDs
- ~ Operations on DFs
- ~ Parquet files with Spark Sql Read, Write, Partitioning, Merging schema
- ~ ORC files
- ~ JSON files

## => Spark streaming :

- ~ Basic concepts of Spark Streaming
- ~ Linking
- ~ Initializing Streaming Context
- ~ Discretized Streams (DStreams)
- ~ Input DStreams and Receivers
- ~ Transformations on DStreams
- ~ Output operations on DStreams
- ~ DataFrame and SQL operations
- ~ MLlib operations
- ~ Caching / Persistence
- ~ Checkpointing
- ~ Accumulators, Broadcast Variables, and Checkpoints
- ~ Deploying applications
- ~ Performance tuning
- ~ Writing Producer in Python

- ~ Writing Consumer in Python
- ~ Kafka Integration with Spark Streaming
- ~ Fault-tolerance semantics
- ~ Spark Cassandra

#### => Spark Structure streaming :

- ~ Handling Event-time and Late Data
- ~ API using Datasets and DataFrames
- ~ Creating streaming DataFrames and streaming Datasets
- ~ Input Sources
- ~ Schema inference and partition of streaming DataFrames/Datasets
- ~ Operations on streaming DataFrames/Datasets
- ~ Basic Operations - Selection, Projection, Aggregation
- ~ Window Operations on Event Time
- ~ Handling Late Data and Watermarking
- ~ Types of time windows

#### => Launching on a clusters :

- ~ Spark standalone
- ~ Running Spark on Mesos
- ~ Running Spark on YARN
- ~ The Spark Standalone Web UI

#### => PySpark Installtion :

- ~ Installtion using PyPi
- ~ Pyspark setup in local
- ~ Pyspark setup with anaconda
- ~ Pyspark setup with pycharm

#### => PySpark DataFrame :

- ~ DataFrame creation
- ~ Viewing data
- ~ Accesing data
- ~ Applying a function
- ~ Grouping data
- ~ Object creation
- ~ Missing data
- ~ Grouping
- ~ Plotting

#### => Spark Mlib :

- ~ Overview of Mlib
- ~ What is Machine Learning?
- ~ Supervised learning
- ~ Unsupervised learning
- ~ Basic statistics
- ~ Classification algorithms
- ~ Regression algorithms
- ~ Clustering algorithms
- ~ Collaborative filtering
- ~ Frequent pattern mining
- ~ Featurization
- ~ Pipelines
- ~ Persistence
- ~ Spark ml for ml
- ~ Collect traning data
- ~ Different proccessing technique
- ~ Supervised learning
- ~ Linear regression
- ~ Logistic regression

#### => GraphX :

- ~ Overview
- ~ Graph operations
- ~ Graph builders

#### => Spark configuration, monitoring and tuning :

- ~ Understand components of spark cluster
- ~ configure spark to modify the spark properties, environmental variables, or logging properties
- ~ Monitor Spark using the web UIs, metrics, and external instrumentation

#### => Connecting to Data sources :

- ~ Connecting to local file system
- ~ Understanding storage plugins and workspaces
- ~ Connecting to MySQL
- ~ Connecting to Mongo
- ~ Connecting to Kafka
- ~ Connecting to Hive
- ~ Connecting to HBase
- ~ Querying across data sources

#### => Introduction to Sqoop :

- ~ Sqoop introduction
- ~ How Sqoop works?
- ~ Why we use Sqoop?
- ~ Features of Sqoop

#### => Sqoop Tools :

- ~ Sqoop architecture and working
- ~ Using command aliases
- ~ Controlling the Hadoop installation
- ~ Using generic and specific arguments

~ *Using options files to pass arguments*

=> Sqoop import :

~ *Purpose of Sqoop import*  
~ *Connecting to a database server*  
~ *Selecting the data to import*

=> Sqoop export :

~ *Purpose of Sqoop export*  
~ *Inserts vs Updates*  
~ *Exports and Transactions*

=> Sqoop - Job :

~ *Create Job*  
~ *Verify Job*  
~ *Inspect Job*  
~ *Execute Job*

=> Setup of Airflow :

~ *Components of Airflow*  
~ *Installing Airflow on mac*  
~ *Installing Airflow on linux*  
~ *Installing Airflow on windows*  
~ *Run Airflow locally*  
~ *Introduction to the Airflow UI*

=> Core concepts of Airflow :

~ *What is DAG?*  
~ *DAG skeleton*  
~ *Default arguments*  
~ *Instantiate a DAG*

=> Loading data to Data Warehouse :

~ *Set up*  
~ *Connections*  
~ *Load data from storage*  
~ *Run SQL query*

=> Docker Image for Apache Airflow :

~ *Introduction to Docker*  
~ *Why custom image?*  
~ *How to build your own image?*  
~ *Extending vs. customizing the image*

=> Monitoring Airflow :

~ *Airflow monitoring with StatsD*  
~ *Airflow monitoring with Prometheus*  
~ *Airflow monitoring with Graphana*  
~ *Error tracking with Sentry*

=> Introduction to Zookeeper :

~ *Introduction of Apache Zookeeper*  
~ *Why we need Zookeeper?*  
~ *What is Distributed system?*

=> Internal structure :

~ *Zookeeper Background*  
~ *Architecture Diagram*  
~ *Important Components*

=> Data models and Znodes :

~ *Data model and Znode structure*  
~ *What is Apache Zookeeper Znodes?*  
~ *Sessions and watches*

=> Installation of Zookeeper :

~ *Installation of Apache zookeeper*  
~ *Configuration of Apache zookeeper*  
~ *Starting Apache zookeeper server*  
~ *CLI operations*

=> Role of Zookeeper in kafka :

~ *Kafka brokers*  
~ *Kafka consumers*  
~ *How does Kafka talk to Zookeeper?*  
~ *Zookeeper production deployment*

=> Monitoring in Zookeeper - Kafka :

~ *Operating system*  
~ *JMX monitoring*

=> Introduction to Ambari :

~ *What is Apache Ambari?*  
~ *Overview of Apache Ambari*  
~ *History of Apache Ambari*  
~ *Goals of Apache Ambari*

=> Core applications of Ambari :

~ *Server*  
~ *Agent*  
~ *Web UI*  
~ *Database*

=> Ambari usage :

- ~ Provisioning of Hadoop cluster
- ~ Monitoring of Hadoop cluster
- ~ Management of Hadoop cluster

=> How is Ambari is different from Zookeeper? :

- ~ Basic task
- ~ Nature
- ~ Status maintenance

=> Introduction to Cloud Databricks :

- ~ Introduction about cloud
- ~ Why cloud is important
- ~ Introduction to Databricks

=> Data ingestion - CSV files :

- ~ Data ingestion overview
- ~ What is circuits file
- ~ Requirements
- ~ DataFrame reader
- ~ Select columns
- ~ DataFrame writer

=> Data ingestion - JSON files :

- ~ What is JSON File?
- ~ Write data

=> Introduction to Confluent :

- ~ Overview of Confluent
- ~ Features of Confluent

=> Getting started with Confluent :

- ~ Free trail for Confluent cloud
- ~ Quick start for Apache Kafka using confluent cloud
- ~ Confluent cloud console basics

=> Kafka Clusters :

- ~ Features and limits by cluster type
- ~ Create a cluster with a console
- ~ Expand a dedicated cluster with console
- ~ Shrink a dedicated cluster with console
- ~ Cluster management API overview
- ~ Migrate topics on confluent cloud clusters

=> Manage topics in cloud console :

- ~ Overview
- ~ Create, edit and delete topics
- ~ Use the message browser

=> Introduction to AWS :

- ~ What is AWS?
- ~ AWS solutions for BigData?
- ~ What is Data ingestion?

=> Cloud computing on AWS :

- ~ What is cloud computing?
- ~ Cloud services by AWS
- ~ Cloud Computing Tools on AWS
- ~ Cloding Computing Tools Pricing
- ~ Introduction to AWS S3
- ~ Creating your First S3 bucket
- ~ Uploading an object to your Bucket
- ~ Download an object
- ~ Copy your object to a Folder
- ~ Delete your object and Bucket

=> AWS Storage :

- ~ Introduction to AWS storage
- ~ What is Simple storage Service (S3)?
- ~ How S3 works?
- ~ Use cases of S3
- ~ Storage Hierarchy in S3
- ~ Buckets in S3
- ~ S3 pricing
- ~ Creating and S3 bucket
- ~ Uploading objects to the S3 bucket
- ~ What is Amazon S3 Glacier?
- ~ Glacier Vaults
- ~ Glacier Archives
- ~ Accessing Amazon S3 Glacier

=> AWS Databases :

- ~ Enabling object versioning in the S3 bucket
- ~ Databases on AWS
- ~ Introduction to Amazon Relational Database Service(RDS)
- ~ Features of RDS
- ~ Engine types Configuration
- ~ RDS Pricing
- ~ Creating a SQL Server DB Instance
- ~ Introduction to Amazon Aurora
- ~ Benefits of Amazon Aurora
- ~ Create an Aurora DB cluster
- ~ Introduction to Amazon Dynamo DB

- ~ Components of DynamoDB
- ~ Creating a DynamoDB table.
- ~ Connecting to the DB Instance From Your Machine
- ~ DynamoDB Items and Indexes
- ~ Dynamo Backup and Restore

#### => Collection :

- ~ Collection
- ~ Collection Section Introduction
- ~ Kinesis Data Streams Overview
- ~ Hot shard
- ~ Kinesis Producers
- ~ Kinesis Consumers
- ~ Kinesis Enhanced Fan Out
- ~ Kinesis Scaling
- ~ Kinesis - Handling Duplicate Records
- ~ Kinesis Security
- ~ Kinesis Data Firehose
- ~ CloudWatch Subscription Filters with Kinesis
- ~ SQS Overview
- ~ SQS Hands On
- ~ Kinesis Data Streams vs SQS
- ~ IoT Overview
- ~ IoT Components Deep Dive
- ~ Database Migration Service (DMS)
- ~ Direct Connect
- ~ AWS Snow Family Overview
- ~ AWS Snow Family Hands On
- ~ MSK: Managed Streaming for Apache Kafka
- ~ Kinesis vs MSK

#### => Storage :

- ~ S3 Overview
- ~ S3 Hands On
- ~ S3 Security: Bucket Policy
- ~ S3 Security: Bucket Policy Hands On
- ~ S3 Website Overview
- ~ S3 Website Hands On
- ~ S3 Versioning Overview
- ~ S3 Versioning Hands On
- ~ S3 Server Access Logging
- ~ S3 Server Access Logging Hands On
- ~ S3 Replication Overview
- ~ S3 Replication Hands On
- ~ S3 Storage Classes Overview
- ~ S3 Storage Classes Hands On
- ~ S3 Glacier Vault Lock & S3 Object Lock
- ~ S3 Encryption
- ~ Shared Responsibility Model for S3
- ~ DynamoDB Overview
- ~ DynamoDB RCU & WCU
- ~ DynamoDB Partitions
- ~ DynamoDB APIs
- ~ DynamoDB Indexes: LSI & GSI
- ~ DynamoDB DAX
- ~ DynamoDB Streams
- ~ DynamoDB TTL
- ~ DynamoDB Security
- ~ DynamoDB: Storing Large Objects

#### => Processing :

- ~ Section Introduction: Processing
- ~ Lambda Overview
- ~ Lambda Hands On
- ~ [Exercise] AWS Lambda
- ~ Why Cloud & Big Data on Cloud
- ~ What is Virtual Machine
- ~ On-Premise vs Cloud Setup
- ~ Major Vendors of Hadoop Distribution
- ~ Hdfs vs S3
- ~ Important Instances in AWS
- ~ Spark Basics
- ~ Why spark is difficult
- ~ Overview of EMR
- ~ What is EMR
- ~ Tez vs mapreduce
- ~ Launching an emr cluster
- ~ connecting to your cluster
- ~ Create a tunnel for web ui
- ~ Use Hue to interact with EMR
- ~ Transient vs Long Running Cluster Running
- ~ Copy File From S3 to Local Zeppelin Notebook
- ~ How to Create a VM
- ~ S3 & EBS
- ~ Public ip Vs Private Ip
- ~ Aws Command Line Interface
- ~ AWS Glue
- ~ Introduction to Amazon Redshift
- ~ Redshift Master Slave Architecture

- ~ redshift demo
- ~ redshift specturm
- ~ Redshift Distribution Styles
- ~ Redshift Fault Tolerance
- ~ Redshift Sort Keys

#### => Analysis :

- ~ Section Introduction: Analysis
- ~ Intro to Kinesis Analytics
- ~ Kinesis Analytics Costs; RANDOM\_CUT\_FOREST
- ~ Intro to Opensearch (formerly Elasticsearch)
- ~ Amazon Opensearch Service
- ~ Opensearch Features
- ~ What is Athena
- ~ When do we require Athena What problem Athena Solve How Athena Works
- ~ Athena Pricing
- ~ Athena Practical Demonstration

#### => Visualization :

- ~ The course overview
- ~ big data analytics and aws
- ~ How Quicksight is different than other BI Tools
- ~ BI solution based on quicksight
- ~ how to get started with quicksight
- ~ Performance Your first analysis
- ~ AWS Big data ecosystem
- ~ importing files to quicksight
- ~ importing databases to quicksight
- ~ importing data from saas services to quicksight
- ~ edit existing data sources in quicksight
- ~ Joining datasets
- ~ using functions
- ~ applying filters
- ~ understanding spice layer
- ~ Creating a Quicksight Analysis
- ~ Explore various charting options
- ~ Exploring various Map options
- ~ Exploring various table and other visual options
- ~ Mini project Overview
- ~ Mini Project Architecture
- ~ Data ingestion for mini project
- ~ Reports and dashboards

#### => Introducing Google Cloud Platform :

- ~ Google platform fundamentals overview.
- ~ Google cloud platform Big Data products.

#### => Compute and Storage Fundamentals :

- ~ CPUs on demand (compute engine).
- ~ A global filesystem (cloud storage).
- ~ CloudShell.
- ~ Set up an Ingest-Transform-Publish data processing pipeline.

#### => Data Analytics on the Cloud :

- ~ Stepping-stones to the cloud.
- ~ Cloud SQL: your SQL database on the cloud.
- ~ Importing data into CloudSQL and running queries.
- ~ Spark on Dataproc.
- ~ Machine Learning recommendations with Spark on Dataproc.

#### => Scaling Data Analysis :

- ~ Fast random access.
- ~ Datalab
- ~ BigQuery.

#### => Introduction to cloud :

- ~ Introduction to Cloud Computing
- ~ Cloud models
- ~ Different cloud providers

#### => Regions and Availability Zones :

- ~ Understanding regions and availability zones in Azure
- ~ Creating microsoft Azure account

#### => Resource Hierarchy :

- ~ Understanding resource hierchy
- ~ Demo on resource hierchy
- ~ Resource groups,subscription and managment groups
- ~ Active directory

#### => Introduction to azure cloud computing :

- ~ Azure services overview
- ~ Managed and unmanaged service
- ~ Demo create Azure SQL Database service

#### => Introduction to data engineer profile :

- ~ Introduction to data engineer Technologies
- ~ Data engineer role and responsibility
- ~ Introduction to data engineer technologies

#### => Azure sql database :

- ~ Module Introduction

- ~ Introduction
- ~ Why choosing SQL Server in Azure
- ~ Azure IaaS vs PaaS database offerings
- ~ SQL server PaaS deployment options
- ~ Introduction to Azure SQL server in virtual machine
- ~ SQL Server in Azure virtual machine
- ~ SQL server in Azure virtual machine
- ~ Introduction Azure single database

=> Introduction to SQL :

- ~ Why SQL?
- ~ Application of SQL
- ~ Characteristics of SQL
- ~ Installation guide
- ~ Connection & set up
- ~ Create database
- ~ RENAME database
- ~ Drop database
- ~ SELECT database

=> Data type of SQL :

- ~ Binary datatypes
- ~ Approximate numeric datatype
- ~ Exact numeric datatype
- ~ Character string datatype
- ~ Date and time datatype

=> Introduction to SQL syntax :

- ~ SQL SELECT statement
- ~ SQL WHERE clause
- ~ SQL DISTINCT clause
- ~ SQL AND/OR clause
- ~ SQL IN clause
- ~ SQL LIKE clause
- ~ SQL BETWEEN clause
- ~ SQL ORDER BY clause
- ~ SQL GROUP BY clause
- ~ SQL COUNT clause
- ~ SQL HAVING clause
- ~ SQL CREATE TABLE statement
- ~ SQL DROP TABLE statement
- ~ SQL CREATE INDEX statement
- ~ SQL DROP INDEX statement
- ~ SQL DESC statement
- ~ SQL TRUNCATE TABLE statement
- ~ SQL ALTER TABLE statement
- ~ SQL ALTER TABLE statement(rename)
- ~ SQL INSERT INTO statement
- ~ SQL UPDATE statement
- ~ SQL DELETE statement
- ~ SQL CREATE DATABASE statement
- ~ SQL DROP DATABASE statement
- ~ SQL USE statement
- ~ SQL COMMIT statement
- ~ SQL ROLLBACK statement

=> Operators in SQL :

- ~ Arithmetic operators
- ~ Comparison operators
- ~ Logical operators
- ~ Operators used to negate conditions

=> SQL Query :

- ~ CREATE table
- ~ CREATE table with PRIMARY KEY
- ~ CREATE table with FOREIGN KEY
- ~ DELETE table
- ~ TRUNCATE table
- ~ TEMP table
- ~ RENAME table
- ~ DROP table
- ~ COPY table
- ~ ALTER table
- ~ INSERT query
- ~ UPDATE query
- ~ DELETE query

=> SELECT Query :

- ~ SELECT statement
- ~ SELECT UNIQUE
- ~ SELECT DISTINCT
- ~ SELECT COUNT
- ~ SELECT TOP
- ~ SELECT LAST
- ~ SELECT RANDOM
- ~ SELECT IN
- ~ SELECT RANDOM
- ~ SELECT MULTIPLE
- ~ SELECT DATE
- ~ SELECT SUM

- ~ *SELECT NULL*
- ~ *SELECT group by*

=> SQL Clause :

- ~ *WHERE clause*
- ~ *AND clause*
- ~ *OR clause*
- ~ *WITH clause*
- ~ *AS clause*
- ~ *HAVING clause*
- ~ *Like clause*
- ~ *IS NULL clause*
- ~ *UNION clause*
- ~ *UNION All clause*
- ~ *Top clause*

=> SQL Order By :

- ~ *ORDER BY clause*
- ~ *ORDER BY ASC*
- ~ *ORDER BY DESC*
- ~ *ORDER BY*

=> SQL Constraints :

- ~ *NOT NULL constraint*
- ~ *DEFAULT constraint*
- ~ *UNIQUE constraint*
- ~ *PRIMARY key*
- ~ *FOREIGN key*
- ~ *CHECK constraint*
- ~ *INDEX*
- ~ *Introduction to views*

=> Functions(Aggregate) :

- ~ *Conditional aggregation*
- ~ *List concatenation*
- ~ *SUM*
- ~ *AVG()*
- ~ *Count*
- ~ *Min*
- ~ *Max*

=> SQL Joins :

- ~ *INNER JOIN*
- ~ *LEFT JOIN*
- ~ *RIGHT JOIN*
- ~ *FULL JOIN*
- ~ *SELF JOIN*
- ~ *CARTESIAN JOIN*

=> Views in SQL :

- ~ *Creating view*
- ~ *Creating view from single table*
- ~ *Creating view from multiple tables*
- ~ *Delete view*

=> Window Functions :

- ~ *Setting up a flag if other rows have a common property*
- ~ *Finding "Out-of-Sequence" records using the LAG() function*
- ~ *Getting a running total*
- ~ *Adding the total rows selected to every row*
- ~ *Getting the N most recent rows over multiple grouping*

=> Subqueries :

- ~ *Subquery in FROM clause*
- ~ *Subquery in SELECT clause*
- ~ *Subquery in WHERE clause*
- ~ *Correlated subqueries*
- ~ *Filter query results using query on different table*
- ~ *Subqueries in FROM clause*
- ~ *Subqueries in WHERE clause*

=> Stored Procedures :

- ~ *Create and call a stored procedure*
- ~ *In and out parameters*
- ~ *If, Elseif and Else*
- ~ *Case*
- ~ *While*

=> Triggers :

- ~ *CREATE TRIGGER*
- ~ *Use trigger to manage a "Recycle Bin" for deleted items*

=> AWS Lambda :

- ~ *What is AWS Lambda and Why it is needed?*
- ~ *Features & Limitations of Lambda*
- ~ *Hello world program using Lambda*
- ~ *Auto trigger Lambda Function based on S3 file upload notification*
- ~ *Access other services from Lambda*

=> AWS Secret Manager :

- ~ *Create and Maintain secrets*
- ~ *Accessing credentials from Secret Manager using Boto3*



=> AWS Glue :

- ~ Setting up cluster in Glue
- ~ Properties of Glue
- ~ Creating Catalogs in Glue
- ~ Read partitioned Data
- ~ Bulk and Incremental data processing from S3 in Glue
- ~ Data Processing in Glue
- ~ Glue jobs and Triggers

=> AWS SQS :

- ~ What is SQS?
- ~ Different types of SQS?
- ~ At-Least once and Exactly once delivery via SQS
- ~ Ingesting data to SQS
- ~ Inflight messages
- ~ Consume data from SQS
- ~ Dead Letter Queue

=> AWS Kinesis :

- ~ Ingesting real time data in Kafka Streams
- ~ Consume real time data from Kafka Streams

=> AWS Cloudwatch :

- ~ Cron based triggers
- ~ Event pattern based triggers
- ~ Monitoring & Alerting using Cloudwatch

=> AWS QuickSight :

- ~ Creating business dashboards using Quick sight

=> AWS EC2 :

- ~ Launch a Basic EC2 Instance
- ~ Different Types of instances - Reserved, On-Demand, Spot, Dedicated
- ~ Different configurations of EC2 machines
- ~ Attaching detaching of EBS Volume in EC2
- ~ Practising few commands on EC2

=> AWS IAM :

- ~ The Mechanics behind IAM
- ~ Managing IAM Users
- ~ IAM Administration (Guide) (Listing, Deleting Users & Accounts)
- ~ Managing Permissions for IAM Users
- ~ Changing IAM User Permissions
- ~ Creating and Administering IAM Groups
- ~ Creating and Administering IAM Group Policies
- ~ Assigning Preset and Custom Group Policies

=> AWS S3 :

- ~ Buckets
- ~ Objects
- ~ Upload, Delete Files
- ~ Data Encryptions
- ~ Pricing & Data Limitation on S3
- ~ S3 Versioning
- ~ Version ID
- ~ Bucket policy
- ~ Notifications from S3
- ~ Work with S3 using AWS CLI
- ~ AWS Lambda
- ~ What is AWS Lambda and Why it is needed?
- ~ Features & Limitations of Lambda
- ~ Hello world program using Lambda
- ~ Auto trigger Lambda Function based on S3 file upload notification
- ~ Access other services from Lambda
- ~ AWS Secret Manager
- ~ Create and Maintain secrets
- ~ Accessing credentials from Secret Manager using Boto3

=> AWS EMR :

- ~ Setting up EMR Cluster
- ~ Install Spark, Hive, Hadoop
- ~ Resource types in EMR cluster
- ~ Data Processing on EMR Cluster
- ~ AWS Glue
- ~ Setting up cluster in Glue
- ~ Properties of Glue
- ~ Creating Catalogs in Glue
- ~ Read partitioned Data
- ~ Bulk and Incremental data processing from S3 in Glue
- ~ Data Processing in Glue
- ~ Glue jobs and Triggers

=> AWS SNS :

- ~ What is SNS?
- ~ How SNS works?
- ~ Creating SNS Topics and subscribing
- ~ Different types of subscribers
- ~ Sending notifications via SNS
- ~ AWS SQS
- ~ What is SQS?
- ~ Different types of SQS?

- ~ At-Least once and Exactly once delivery via SQS
- ~ Ingesting data to SQS
- ~ Inflight messages
- ~ Consume data from SQS
- ~ Dead Letter Queue

=> AWS DMS :

- ~ What is DMS?
- ~ Capturing CDC event in DMS where Database as a source
- ~ Capture CDC events and sending it to downstream systems
- ~ AWS Kinesis
- ~ Creating Kinesis Streams
- ~ Ingesting real time data in Kafka Streams
- ~ Consume real time data from Kafka Streams

=> AWS RDS :

- ~ MySQL Database using AWS RDS
- ~ Scalability & Limitations of AWS RDS
- ~ Creating tables and loading data in AWS RDS
- ~ Querying data from RDS
- ~ AWS Athena
- ~ What is serverless database services
- ~ Athena vs RDS
- ~ Table metadata in Athena for the data residing in S3
- ~ Creating table for S3 data
- ~ Querying S3 data using Athena

=> AWS Redshift :

- ~ What is Data warehousing services?
- ~ Architecture of Redshift
- ~ Resources types in Redshift Cluster
- ~ Creating tables in Redshift
- ~ Internal & External tables
- ~ Partitioning, Sort Keys, Column compression
- ~ Querying data in Redshift
- ~ Views & Materialized views in Redshift

=> AWS Dynamo :

- ~ Architecture of DynamoDB
- ~ Creating tables and Ingesting data into DynamoDB table
- ~ Querying data from DynamoDB
- ~ AWS Cloudwatch
- ~ Cron based triggers
- ~ Event pattern based triggers
- ~ Monitoring & Alerting using Cloudwatch
- ~ AWS QuickSight
- ~ Creating business dashboards using Quick sight

### Project details :-

=> End to End Project :

- ~ Big data end to end project with deployment

# C Sharp Programming

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Topic Name : PROGRAMMING

Sub-topic Name : C Sharp

Course link : <https://ineuron.ai/course/C-Sharp-Programming>

## Course Description :-

Learn the fundamentals of C# programming.

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => Understanding .NET SDK CLI ,creatingbuilding & running first project.
- => Framework vs Language
- => C# is case sensitive and understanding compile errors in CLI.
- => Creating projects using visual studio
- => Project and Solution in visual studio
- => Building and compile using visual studio
- => Difference between C# and .NET
- => CLR
- => Architecture of .NET Framework
- => C# Operators
- => C# Operator Precedence & Associativity
- => C# Bitwise Operators
- => C# Arrays
- => C# Multidimensional Arrays
- => C# Inheritance
- => C# using
- => C# Type Conversion & Casting
- => C# Preprocessor Directives

## Requirements :-

- => System with Internet Connection
- => Interest to learn
- => Dedication

## Curriculum details :-

- => Introduction :
  - ~ DownloadInstallation of .NET &.NET core vs .NET Framework
  - ~ Understanding .NET SDK CLI ,creatingbuilding & running first project.
  - ~ Framework vs Language
  - ~ C# is case sensitive and understanding compile errors in CLI.
  - ~ Introduction, Download and Installation of VS Code editor.
  - ~ Opening folder in VS code , intellisense and terminal.
  - ~ NET Compilation process & Intermediate language code
  - ~ Visual studio vs VS Code vs Visual studio for Mac
  - ~ Installing and configuring visual studio work loads part 1
  - ~ Installing and configuring visual studio work loads part 2
  - ~ Creating projects using visual studio
  - ~ Project and Solution in visual studio
  - ~ Building and compile using visual studio
  - ~ Running projects as startup
  - ~ Understanding basic code class, namespace and scopes
  - ~ Assembly , Exe and DLL Part 1
  - ~ Assembly , Exe and DLL Part 2

=> C# Introduction :

- ~ *Introduction*
- ~ *Difference between C# and .NET*
- ~ *CLR*
- ~ *Architecture of .NET Framework*
- ~ *C# Hello World*
- ~ *C# Keywords & Identifiers*
- ~ *C# Variables and Data types*
- ~ *Demo C# Variables*
- ~ *C# Operators*
- ~ *C# Operator Precedence & Associativity*
- ~ *C# Bitwise Operators*
- ~ *C# Basic IO*
- ~ *C# Expressions & Statements*
- ~ *C# Comments*

=> C# Flow Control :

- ~ *C# if...else*
- ~ *C# switch Statement*
- ~ *C# Ternary Operator*
- ~ *C# while Loop*
- ~ *C# for Loop*
- ~ *C# Nested Loops*
- ~ *C# break Statement*
- ~ *C# continue Statement*

=> C# Arrays :

- ~ *C# Arrays*
- ~ *C# Multidimensional Arrays*
- ~ *C# Jagged Array*
- ~ *C# foreach Loop*

=> C# OOP part 1 :

- ~ *C# Class and Objects*
- ~ *C# Methods*
- ~ *C# Access Modifiers*
- ~ *C# Variable Scope*
- ~ *C# Constructors*
- ~ *C# this Keyword*
- ~ *C# static Keyword*
- ~ *C# Strings*

=> C# OOP (II) :

- ~ *C# Inheritance*
- ~ *C# Abstract Class & Methods*
- ~ *C# Nested Class*
- ~ *C# Partial Class & Method*
- ~ *C# Sealed Class & Method*
- ~ *C# Interface*
- ~ *C# Method Overloading*
- ~ *C# Constructor Overloading*

=> Additional Topics :

- ~ *C# using*
- ~ *C# Type Conversion & Casting*
- ~ *C# Preprocessor Directives*
- ~ *C# Namespaces*
- ~ *C# struct*

# Stripe with React and Node Crash Course

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Topic Name : WEB DEVELOPEMENT

Sub-topic Name : WEB DEVELOPMENT PROJECT

Course link : <https://ineuron.ai/course/Stripe-with-React-and-Node-Crash-Course>

## Course Description :-

This course will help you to grab the implementation of Stripe with React and Node.

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => Stripe with React and Node

## 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 :-

=> Stripe with React and Node :

*~ Stripe with React and Node*

=> NaN :

- ~ NaN*
- ~ NaN*
- ~ NaN*
- ~ NaN*
- ~ NaN*
- ~ NaN*

# Golang

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Topic Name : PROGRAMMING

Sub-topic Name : GOLANG

Course link : <https://ineuron.ai/course/Golang>

## Course Description :-

The following concepts will be covered in this course training: golang basics, features, environment setup, program structure, syntaxes, data types, type casting, operators, array, recursion, interfaces, error handling, and packages, among others.

## Course Features :-

- => Course material
- => Course resources
- => On demand recorded videos
- => Practical exercises
- => Quizzes
- => Assignments
- => Course completion certificate

## What you will learn :-

- => Golang installation and hello world
- => GOPATH and reading go docs
- => Build for windows, linux and mac
- => Memory management in golang
- => Pointers in golang
- => Array in golang
- => Slices in golang
- => Functions in golang
- => Methods in golang
- => Defer in golang
- => Working with files in golang

## 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 :-

- => Golang :
  - ~ Welcome to series on GO programming language
  - ~ Before you start with golang
  - ~ Golang installation and hello world
  - ~ GOPATH and reading go docs
  - ~ Lexer in golang and Types
  - ~ Variables, types and constants
  - ~ Comma ok syntax and packages in golang
  - ~ Conversions in golang
  - ~ Handling time in golang
  - ~ Build for windows, linux and mac
  - ~ Memory management in golang
  - ~ Pointers in golang
  - ~ Array in golang
  - ~ Slices in golang
  - ~ How to remove a value from slice based on index in golang
  - ~ Maps in golang
  - ~ Structs in golang
  - ~ If else in golang
  - ~ Switch case in golang and online playground
  - ~ Loop break continue and goto in golang
  - ~ Functions in golang

- ~ *Methods in golang*
- ~ *Defer in golang*
- ~ *Working with files in golang*
- ~ *Handling web request in golang*
- ~ *Handling URL in golang*
- ~ *Creating server for golang frontend*
- ~ *How to make GET request in golang*
- ~ *How to make POST request with JSON data in golang*
- ~ *How to send form data in golang*
- ~ *How to create JSON data in golang*
- ~ *How to consume JSON data in golang*
- ~ *A long video on MOD in golang*
- ~ *Building API in golang - Models*
- ~ *Sending a API json response for all courses in golang*
- ~ *Get one course based on request id in golang*
- ~ *Add a course controller in golang*
- ~ *Update a course controller in golang*
- ~ *Delete a course controller in golang*
- ~ *Handling routes and testing routes in golang*
- ~ *MongoDB setup for API in golang*
- ~ *Defining models for netflix in golang*
- ~ *Making a connection to database in golang*
- ~ *Insert data in mongodb in golang*
- ~ *Update a record in mongodb in golang*
- ~ *Delete one and delete many in mongodb in golang*
- ~ *Get all collection in mongodb in golang*
- ~ *Get all movies from DB in golang*
- ~ *Mark movie as watched in golang*
- ~ *Delete 1 and all movie in golang*
- ~ *Creating routes and testing API in golang*
- ~ *Concurrency and goroutines in golang*
- ~ *Wait groups in golang*
- ~ *Mutex in golang*
- ~ *Race Condition in golang*
- ~ *Channels and Deadlock in golang*
- ~ *Math, crypto and random number in golang*

# Sign Language Detection

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Topic Name : DATA SCIENCE

Sub-topic Name : COMPUTER VISION PROJECT

Course link : <https://ineuron.ai/course/Sign-Language-Detection>

## Course Description :-

The main point of this application is to use the camera to recognize gestures from the sign language to offer a new means of communication. The program will be able to transcribe gestures done by dumb people into written words printed on the screen.

## 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
- => Sign Language Detection
- => Object detection with YOLO v5
- => Creating custom dataset using OpenCV
- => How to work with bash cmd & Docker
- => Modular coding approach for training and prediction pipeline along with Flask app
- => Learn about AWS
- => Basics of CICD tools
- => Github Actions for Production-grade deployment

## Requirements :-

- => System with minimum i3 processor or better
- => At least 4 GB of RAM
- => Working internet connection
- => Dedication to learn

## Instructors :-

=> Boktiar Ahmed Bappy :

~ This is Bappy. I aim for simplicity in Data Science. Real Creativity won't make things more complex. Instead, I will simplify them, Interested in a Data Science Career and so develop myself accordingly. Data Scientist and lecturer with working experience in Machine Learning, Deep Learning, Microcontrollers and Electronics systems. Hands-on experience in classification, regression, clustering, computer vision, natural language processing and transfer learning models to solve challenging business problems. I have a huge interest in Robotics. I have innovated a lot of innovations, ideas, projects & robots and got a lot of achievements.

## Curriculum details :-

=> Welcome to the Course :

- ~ Course Overview
- ~ Dashboard Introduction

=> Project :- Sign Language Detection :

- ~ Introduction of Instructor
- ~ Project Overview
- ~ End Notes
- ~ Problem Description
- ~ Understand the application scope
- ~ Tour to existing solution
- ~ End Notes
- ~ Solution Description
- ~ Notebook Walkthrough
- ~ Tour to Architecture diagram
- ~ cost involved
- ~ End Notes
- ~ Structure overview
- ~ Data Ingestion
- ~ Data Validation
- ~ Data Transformation
- ~ Model Training and Tunning
- ~ Model Evaluation
- ~ Model Pusher
- ~ Training Pipeline



- ~ *Prediction Pipeline*
- ~ *Frontend app design*
- ~ *Tour to the cloud and Service Overview (AWS)*
- ~ *IAM setup*
- ~ *ECR setup*
- ~ *EC2 setup*
- ~ *Self hosted runner*
- ~ *docker*
- ~ *Conclude the project*
- ~ *Assignments & External Resources*

# Automatic Number Plate Recognition

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Topic Name : DATA SCIENCE

Sub-topic Name : COMPUTER VISION

Course link : <https://ineuron.ai/course/Automatic-Number-Plate-Recognition>

## Course Description :-

In the following project, we will understand how to recognize License number plates using Python. We will utilize OpenCV for this project in order to identify the license number plates and the Paddle OCR for the characters and digits extraction from the plate. We will create a web app with a Flask framework that automatically recognizes the License Number Plate .

## Course Features :-

- => Do Everything In Industry Grade Lab
- => Learn As Per Your Timeline
- => Hands-On Industry Real-Time Projects.
- => Self Paced Learning
- => Dashboard Access
- => Course Materials
- => Assignments

## What you will learn :-

- => Real Time Projects
- => Automatic Number Plate Recognition
- => Object detection using tensorflow
- => Paddle OCR
- => Modular Coding Techniques
- => Learn about AWS basics along with CICD tools like Github actions for production-grade deployment
- => Flask web framework

## Requirements :-

- => System with minimum i3 processor or better
- => At least 4 GB of RAM
- => Working internet connection
- => Dedication to learn

## 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.

## Curriculum details :-

- => Welcome to the Course :
  - ~ Course Overview
  - ~ Dashboard Introduction
- => Project :- Automatic Number Plate Recognition :
  - ~ Introduction of Instructor
  - ~ Project Overview
  - ~ Application Tour
  - ~ Jupyter Notebook Walkthrough
  - ~ Tour to Architecture diagram
  - ~ Folder Structure overview
  - ~ Environment and Project Setup
  - ~ Data Ingestion
  - ~ Data Transformation
  - ~ Prepare Base Model
  - ~ Model Training
  - ~ Model Pusher
  - ~ Training Pipeline
  - ~ Prediction Pipeline
  - ~ Frontend app development
  - ~ Running project locally
  - ~ Running project using Docker
  - ~ Tour to the cloud and Service Overview (AWS)
  - ~ IAM setup
  - ~ ECR setup
  - ~ EC2 setup

- ~ *Self hosted runner*
- ~ *Assignments Discussion*
- ~ *End Notes*