Relevant Data Science Course for Industry and Research

Course Structure

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B2M
Beginner to Maestro

Big Data Vs Data Science Vs Data Analytics

Big Data	Data Science	Data Analytics
Huge Volume of unorganized Data	Tackle to extract information	Fundamental level of Data Science
Generated in Multi-Terabytes	An interdisciplinary field associated with structured and unstructured Data	Uses data mining and statistical techniques
Fast and appears in distinct form	Intersection of Math, Stat, Machine Learning, Deep Learning and Data-Analysis	Find patterns from historical Data to provide better solution
Capture, store, analyze and search in seconds	Provide knowledgeable business insights	Data Science uses data analytics to find actionable insights
Hadoop, Spark, MongoDB	Python, R	Python, R

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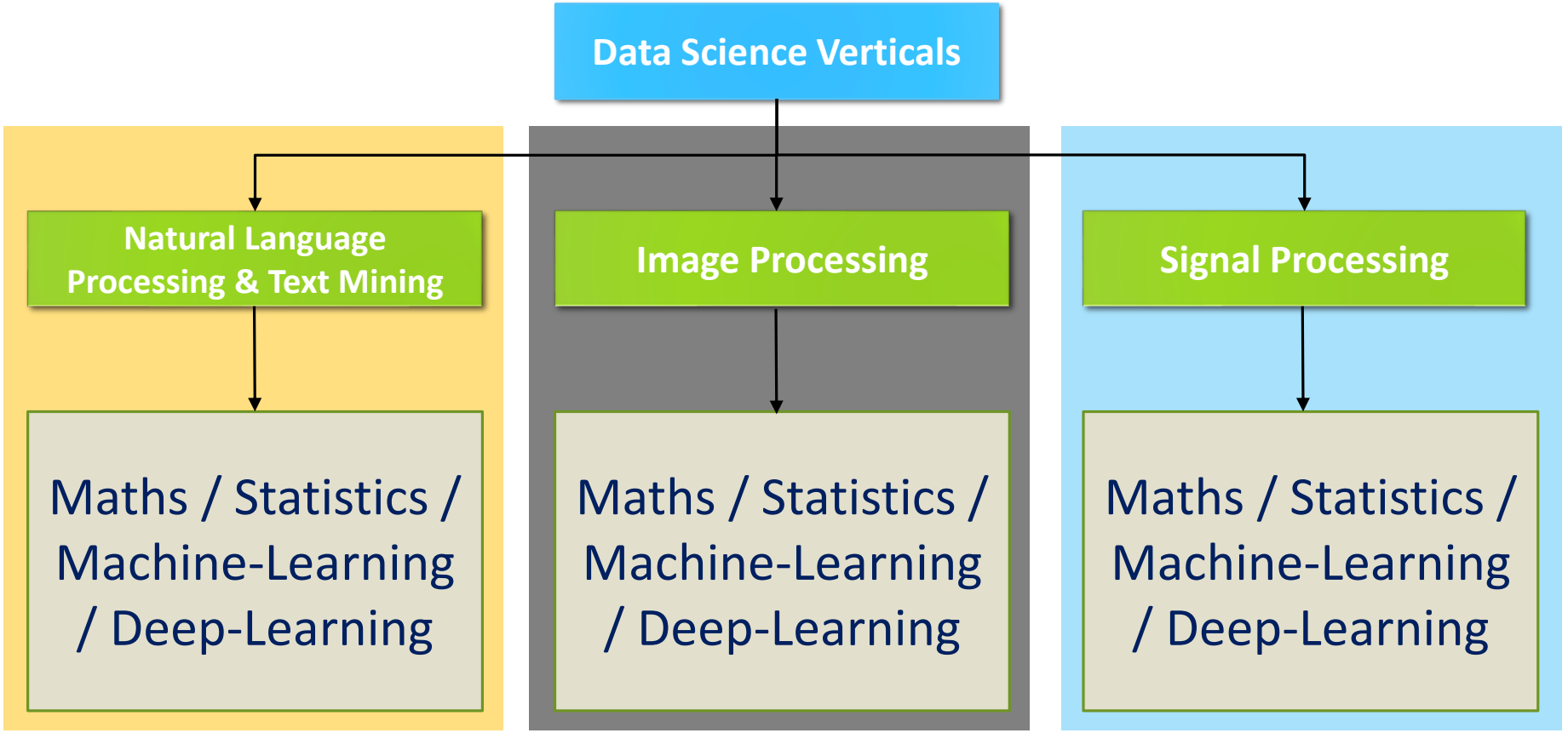
Data Science Course Verticals



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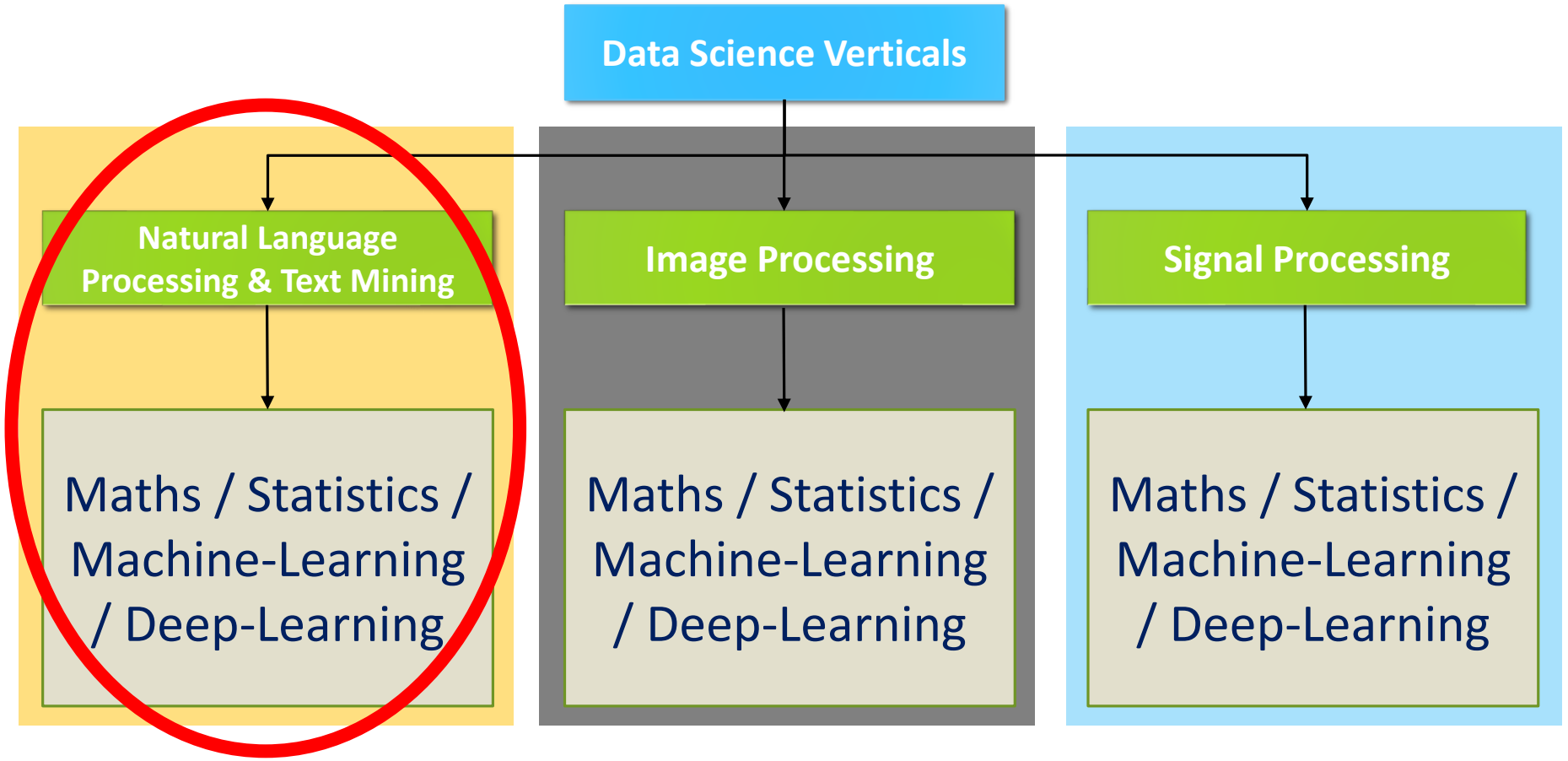
Data Science Course Verticals



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Beginner to Maestro

1

python

2

statistics

TAGLINE HERE

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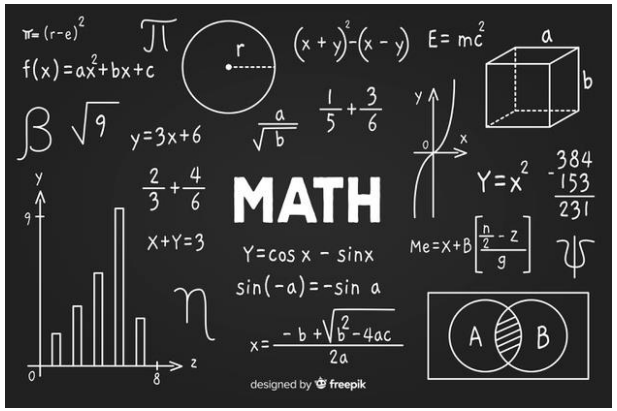

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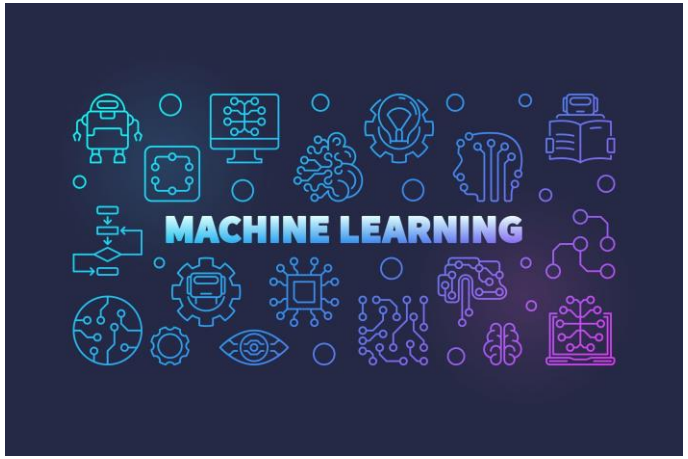
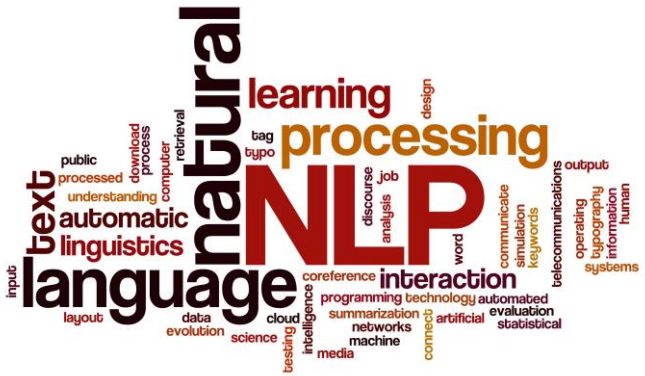


4

DEEP LEARNING

5



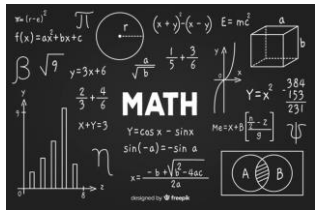
Course Structure of this Series

B2M Beginner to Maestro

Topic No.	Topic Name
1.	Teaser of Python Automation
2.	Anaconda Installation, Pip Installation & Basics of Python
3.	Variable, Lists, Sets, Dictionaries & Tuples
4.	If-Elif operation, Loops with “Break” & “Continue” concept
5.	Try-Except & List comprehension
6.	Numpy, Scipy & Pandas basics
7.	Pandas detail operations
8.	Matplotlib & Seaborn
9.	Folium for geo-data plotting
10.	Inbuilt, user-define & lambda functions
11.	Data Scrapping using Selenium & Beautiful Soup
12.	Python-Database Connectivity
13.	Flask for Web Application
14.	Flask with Django concept
15.	Example of an industry project using list, pandas, numpy, selenium & flask

Course Structure Of Python

B2M
Beginner to Maestro



&

statistics
TAGLINE HERE

Topic No.	Topic Name
1.	Linear Algebra: Vector Concept
2.	Linear Algebra: Matrix Concept
3.	Linear Algebra: Concept of Eigenvalues and eigenvectors
4.	Statistics: Probability
5.	Statistics: Random variables, expectation, variance, co-variance
6.	Statistics: Central Limit Theorem, Laws of Large Numbers
7.	Statistics: Six-Sigma Concept Using Nelson's Rule
8.	Statistics: Performance Analysis (Precision, Recall, F1-Score, Accuracy, R-Square, MSE, MAE)
9.	Statistics: Distributions (Normal, Uniform)
10.	Statistics: T-Test, Z-Test, Chi-Square-Test
11.	Statistics: Hypothesis Testing
12.	Statistics: Robustness Checking (Sensitivity Analysis)

Course Structure of Math & Stat

B2M
Beginner to Maestro

MACHINE LEARNING

Topic No.	Topic Name
1.	Concept of Supervised and Unsupervised and Semi-Supervised Learning
2.	Regression Concept
3.	Regression: Linear Regression with Math Example
4.	Classification Concept
5.	Classification: Logistic Regression with Math Example
6.	Classification: Naïve Bayes with Math Example
7.	Classification: Support Vector Machine (SVM) with Math Example
8.	Classification: Decision Tree & Random Forest
9.	Classification: KNN
10.	Boosting Algorithms Concept
11.	Boosting: GBM & XGBoost
12.	Boosting: Light GBM & Cat Boost
13.	Boosting & Bagging Algorithms
14.	Clustering: K-Means Clustering with Math Example
15.	Clustering: Step by Step Hierarchical Clustering
16.	Feature Dimensionality Reduction: PCA with Math Example
17.	Feature Dimensionality Reduction: SVD with Math Example
18.	Feature Dimensionality Reduction: LDA with Math Example

Course Structure of ML

B2M Beginner to Maestro

DEEP LEARNING

Topic No.	Topic Name
1.	Neural Network & Deep Learning Basic Concept
2.	Activation Functions
3.	Activation Functions : Sigmoid & Relu
4.	Back Propagation
5.	Gradient Descent
6.	Chain Rule with Back Propagation
7.	Vanishing Gradient Problem
8.	Dropout Layer
9.	Stochastic Gradient Descent
10.	Global & Local Minima
11.	Recurrent Neural Network (RNN)
12.	A project using RNN
13.	Convolutional Neural Network (CNN)
14.	A project using CNN
15.	LSTM (Long Short Term Memory)
16.	A project using LSTM
17.	Extreme Learning

Course Structure of DL

B2M Beginner to Maestro

Topic No.	Topic Name
1.	Neural Language Processing (NLP) Introduction
2.	NLP Preprocessing: Removing Markup & Removing Punctuation Number
3.	NLP Preprocessing: Tokenization, Stemming, Lemmatization
4.	NLP Preprocessing: Stop word Removing, Synonym & Antonym Finding
5.	Parts of Speech (POS) Tagging & Named Entity Recognition (NER)
6.	Bag of Words, n-grams, Senti-n-grams
7.	Count Vectorizer & TF-IDF
8.	Lexical TF-IDF, Delta TF-IDF, Lex-Delta TFIDF, SENT
9.	Sentiment Analysis
10.	Aspect-Based Sentiment Analysis
11.	Word2Vec Concepts
12.	Text Entailment
13.	Machine Translation
14.	Word Sense Disambiguation (WSD)
15.	HMM and Viterbi Algorithm

Course Structure of NLP

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Thanks for Watching

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