**DATA SCIENCE SYLLABUS**

PYTHON: (BASIC LEVEL)

* PYTHON PROGRAMMING
* LIBRARIES (NUMPY, PANDAS, MATPLOTLIB, SCIPY, SEABORN)

LINEAR ALZEBRA:

* VECTOR
* MATRIX

PROBABILITY & STATISTICS:

* PROBABILITY DISTRIBUTION FUNCTIONS
* STATISTICS FUNCTIONS

OPTIMIZATION TECHNIQUES:

* GRADIENT DESCENT
* STOCHASTIC GRADIENT DESCENT
* ADAPTIVE GRADIEN
* ADAM

SUPERVISED ML ALGORITHMS:

* LINEAR
* MULTI REGRESSION
* LOGISTIC REGRESSION
* NAÏVE BAYES
* SVM
* RANDOM FOREST

UNSUPERVISED ML ALGORITHMS:

* K-MEANS CLUSTERING
* KNN (K-NEAREST NEIGHBOUR)
* PRINCIPAL COMPONENT ANALYSIS
* SINGULAR VALUE DECOMPOSITION
* T-SNE
* U-MAP
* PACMAP

INTERMEDIATE LEVEL (BASIC + DL ALGORITHMS)

* CONVOLUTIONAL NUERAL NETWORKS(CNNs)
* LONG SHORT-TERM MEMORY NETWORKS(LSTMs)
* RECURRENT NUERAL NETWORKS(RNNs)
* GENERATIVE ADVERSARIAL NETWORKS(GANs)
* RADIAL BASIS FUNCTION NETWORKS(RBFNs)
* MULTILAYER PERCEPTION(MLPs)
* SELF ORGANIZING MAPS(SOMs)
* DEEP BELIEF NETWORKS(DBNs)

ADVANCE LEVEL:

* INTERMEDIATE LEVEL
* KAGGLE COMPETETIONS
* MACHINE LEARNING
* RESEARCH PUBLICATION

ML PROGRAM LEARNING METHDOLOGY:

* GEOMETRICAL INTUITION
* MATHEMATICAL INTUTION
* PROBABILISTIC INTUTION
* PROGRAMMING INTUTION
* RESEARCH PAPER INTUTION IDEAS
* ALGO PROFESSOR INTUTION IDEAS

PROJECTS:

* ML INDEPENDENT RESEARCHES
* ML INDUSTRY EXPERTS
* CAREER TRANSITION INDUSTRY EXPERTS
* DATA SCIENTISTS