Python Fundamentals

- Python Basics
- String, List, Indexing
- Tuple, Set & Dict
- If, Else
- For Loops & While loops
- Functions

Advanced Python

- Iterator Generator & File System
- Exception handling
- Module & Packages
- OOPS

Python Modules

- Numpy
- Pandas
- Matplotlib
- Seaborn

Statistics

- Different types of statistics
- Population VS Sample
- Mean,Median,Mode
- Variance and Standard Deviation
- Variables,Random variables
- Percentiles and Quantiles
- 5 number Summary
- Histograms
- Distributions

- Permutations and Combinations
- Covariance
- Pearson correlation And Spearman Correlation
- Hypothesis Testing.

Machine Learning

- Linear Regression
- L1 ,L2 Regularization and Elastic Net
- Logistics Regression
- Decision Tree and Random Forest
- KNN and SVM
- PCA
- DBSCAN
- Naive Bayes
- XG Boost

Deep Learning

- ANN vs BNN
- Perceptron
- Chain Rule
- Back Propagation
- Activation function
    - Linear or Identity Activation Function
    - Non-linear Activation Function
    - Sigmoid or Logistics Activation Function
    - Tanh or hyperbolic tangent Activation Function
    - Relu
    - Leaky Relu
    - Soft Plus
- Loss functions
    - Mean Square
    - Mean Absolute
    - Huber loss
    - Cross entropy(log loss)
    - Relative Entropy
    - Squared Hinge

Natural Language Processing

- Word Embeddings
- RNN
- LSTM and GRU
- Encoder and Decoder Attention Based Models
- GPT and Bert Model
- SOTA model
- Albert and DistillBert