

1. What is tensorflow?
2. Why tensorflow?
3. Tensorflow architecture
4. Tensorflow Diagram
5. Graph, Data and Union.
6. Sum of two integers using placeholders.
7. Training a Regression Model using tensorflow { Sum Sq }
8. Why Machine Learning and Deep Learning are separated?
9. Basic Data - numpy, plot, string, Vectors, boolean
Rank 2 Matrix, Rank 3 Matrix
10. Low matrix
11. operations - add, subtract, Multiply, Div and pow
12. Changing type of Data
13. Variable - Sq and Why Variable.
14. Tensor - Description
15. 1 Matrix = 1 tensor
16. How different from array and list
17. Constant
18. Creating use of strings using tensorflow.
19. Writing using placeholders
20. Variable.
21. Matrix Multiplication using tensorflow.
22. Benefits and Disadvantages of NN and ML.
23. Machine Learning of images
24. A full body Diagram
25. 2D and 3D using Sq.
26. Matrix Input
27. Conv
28. Gpu
29. Keras
30. Why keras?

1. Time series?

2. Why are time series data different from other data.

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3. Advantages from Economic time series

4. When should time series analysis be used?

5. Forecasting horizons

6. Types of time series data

7. Time series types

8. Process at Work of time series

9. Time series components { trend, seasonality, cyclicity, Irregularity }

10. Quarterly with seasonal components

11. Why demand seasonality?

12. Possible causes of seasonality effect?

13. Random

14. Classical decomposition { with types }

15. Multiplicative Model for the annual data

16. Adding seasonal components

17. Smoothing techniques - Moving average, Exponential smoothing

18. Exponential

19. Measuring seasonality Index

20. Seasonality Index

21. Autocorrelation

22. Checking autocorrelation - ACF and PACF
- Ljung-Box

23. Regression analysis

24. Reasons behind the non-stationarity of time series.

25. Making time series stationary

26. Moving average

27. EWMA

28. Differencing

29. Forecasting Models - AR, MA, ARMA, ARIMA, SARIMAX, etc.

30. Code

1. Natural language processing?

2. applications of NLP

3. NLP tasks

4. NLP applications areas

5. Book

Inte

7. Unlabeled NLP

8. Text preprocessing architecture

9. Vector Random fields

10. Gif Code

11. Pipelining Concept

12. Web scraping

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1. NLP Pipeline architecture

2. Human language and why it is special?

3. Problems With human language

4. NLP System

5. Main approaches to NLP

6. Deep learning to NLP

1. Parsing

2. Syntax

3. Syntax trees

4. Why syntax trees

5. CFG { Disambiguation }

6. Dependency parsing

1. Text Mining and NLP

2. Why we focus on text?

3. Need of text Mining

4. Difference between text Mining and NLP

5. Basic structure of a NLP application

6. O.A.

7. Steps of NLP

1. Converting Words to Vectors

(i) BoW

(ii) Count off matrix

(iii) Tf-idf Vectors

2. Why Tdf

3. Tf-idf consistency

3. Cosine similarity, Jaccard Similarity

4. Code - Tf-idf, Cosine similarity, clustering

1. Tokenization

2. Use of tokenization

3. Bigram, Trigram, N-gram

4. Why Bigram { individual words }
When it is done {

1. Word2Vec

2. Word Similarity

3. Converting Word to vector? Why

4. Working of Word2Vec - CBOW

skipgram

5. Representing Words as vectors

1. stemming? { Disambiguation }

2. chunking? { Disambiguation }

3. WordNet?

4. POS tagging?

5. Why POS tagging?

6. NLP

1. POS - S and Dative

2. POS

3. POS disambiguation

4. POS disambiguation reduction

5. Discrete Distribution and Eg.

6. of $X \sim N(\mu, \sigma^2)$

7. ~~Point~~ est. requires a lot of param knowledge.

8. Comments to topic

9. Wards to topic

10. Errors.

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1. Hypothesis testing

2. Code of Hypothesis testing

3. Error of Hypothesis testing

4. Checking Normality - Code

5. Z test

6. Z test to Rank

7. Correlation test

8. One sample test of Mean

9. 2 sample independent test of Mean

10. 2 sample paired test

11. Test of Proportion & Variance

12. Test of Median

13. Chi square test

14. Chi square - goodness of fit

↳ Test of independence

15. Analysis of Variance - F - array

1. Confusion Matrix

2. Precision, Recall, sensitivity, specificity, Entropy

3. Log likelihood

4. Deviance

5. Madfamer R^2

6. Youden's index

7. AIC 7. Likelihood ratio

8. AIC

1. Rnn

2. Rnn architecture

3. Rnn forward and backward propagation

4. LSTM architecture

5. Bidirectional Rnn

6. Encoder and Decoder

7. Attention Model

8. Bert

1

1. Neural Network Architecture
2. Working of Neural Network - step 1
- step 2
3. Activation functions - sigmoid function
- SoftMax function
- ReLU function
- Hyperbolic function
4. Training of Neural Network
- forward and backward propagation
5. Multi Neural Network - Loss and Epoch
6. Gradient Descent
7. Stochastic gradient Descent and batch Mini stochastic gradient Descent
8. Chain rule in back propagation
9. Vanishing gradient Descent
10. Exploding gradient Descent
11. Dropout
12. Dead Receptor Problem - ReLU and Leaky ReLU
13. Weight initialization techniques
- He
- Xavier
- Kaiming
- Uniform and Normal
- LeReNet
14. Loss - Mse / Mse
Labels
Cross Entropy - Binary
Integral
Code

Spark

1. Spark Content
2. Spark Content primitives
3. Spark Config
4. Most Commonly attributes
5. SparkFile

20 years

{ Distributed Modes

6. RDD - fully form
7. When to use RDD

transformations

8. MLlib
9. Spark SQL
 - Spark SQL
 - Spark Streaming
 - Spark MLlib
 - GraphX

Map, Filter, flatMap, Sample, Union, Intersection, Distinct, sortBy, MapPartitions, MapPartitionsWithIndex, groupByKey, Zip, ZipWithIndex, Repartition, Coalesce.

Actions

Reduce, first, takeAction, take, Count, saveAsTextFile,

10. Categories of Spark Components - Programming Language, Libraries, Engine, Cluster Manager, Storage.
11. Spark Architecture.
12. RDD
13. Workflow of RDD
14. Problems With Existing Techniques
15. How RDD solves this problem.
16. Features of Spark RDDs.
17. RDD partition and lineage
18. RDD lineage
19. RDD Partitioning - Local partitioning, - Map, partition