**Machine Learning:**

1. ~~Linear Regression: A linear approach to modeling the relationship between input variables and a continuous output variable.~~
2. ~~Logistic Regression: A classification algorithm used to predict the probability of categorical outcomes based on input features.~~
3. ~~Decision Trees: Tree-like models that make decisions based on features and splitting criteria to solve classification and regression problems.~~
4. ~~Random Forests: An ensemble of decision trees that combine their predictions to improve accuracy and handle complex data.~~
5. ~~Gradient Boosting Machines (GBM): An ensemble learning technique that builds models sequentially, each correcting the mistakes of the previous model – was used with Hidden Markov Model (HMM).~~
6. ~~Support Vector Machines (SVM): A binary classification algorithm that finds the best hyperplane to separate data into different classes.~~
7. ~~K-Nearest Neighbors (KNN): A method that predicts the class of a sample based on the majority class of its k nearest neighbors.~~
8. ~~Naive Bayes: A probabilistic classifier based on Bayes' theorem and the assumption of independence between features.~~
9. ~~Principal Component Analysis (PCA): A dimensionality reduction technique that transforms data into a lower-dimensional space while preserving important information.~~
10. ~~K-Means Clustering: A clustering algorithm that partitions data into k distinct clusters based on similarity.~~
11. ~~Gaussian Mixture Models (GMM): A probabilistic model used for clustering and density estimation by representing data as a mixture of Gaussian distributions.~~
12. ~~Apriori: Apriori algorithm is used for frequent itemset mining in transactional databases to find recurring patterns and associations among items.~~
13. ~~Ridge Regression: A regularized linear regression method that uses L2 regularization to prevent overfitting by shrinking the coefficients.~~
14. ~~Lasso Regression: A regularized linear regression method that uses L1 regularization to perform feature selection and estimate sparse models.~~
15. ~~XGBoost: XGBoost is an optimized gradient boosting algorithm used for supervised learning tasks, offering high performance and efficiency in handling large datasets.~~
16. ~~LightGBM: LightGBM is a gradient boosting framework that efficiently builds powerful predictive models by combining weak learners, using techniques like tree-based learning and histogram-based optimization.~~

**Deep Learning:**

1. ~~Convolutional Neural Networks (CNN): Deep learning models designed for image and video analysis, leveraging convolutional layers to capture spatial hierarchies.~~
2. ~~Recurrent Neural Networks (RNN): Neural networks designed for sequential data processing, capturing dependencies through recurrent connections.~~
3. ~~Neural Style Transfer (NST): Neural Style Transfer (NST) is a deep learning technique that combines the content of one image with the artistic style of another to create a new image with a distinctive visual style.~~
4. ~~Autoencoders: Neural networks used for unsupervised learning by reconstructing the input data, often employed for dimensionality reduction or feature learning.~~
5. ~~Gated Recurrent Unit (GRU): Type of recurrent neural network (RNN) architecture designed for efficient sequential data processing, featuring gating mechanisms that help control information flow within the network.~~
6. Deep Belief Networks (DBN): Stacked networks of restricted Boltzmann machines, used for unsupervised pretraining or feature extraction.
7. Self-Organizing Maps(SOM): Unsupervised learning models that transform high-dimensional data into a lower-dimensional representation while preserving the topology.
8. Variational Autoencoders (VAE): Generative models that utilize a probabilistic encoder-decoder architecture to learn latent representations of data.
9. Multilayer Perceptrons (MLPs) are a class of artificial neural networks with multiple layers of interconnected nodes that can be used for supervised learning tasks, particularly in deep learning applications like image recognition, natural language processing, and predictive modeling.
10. Temporal Convolutional Networks (TCN): Convolutional neural networks designed for sequence modeling tasks, capable of capturing long-range dependencies.
11. NIC (Neural Image Caption): An architecture that integrates CNN and LSTM in a multimodal approach to learn the mapping between images and their corresponding captions.
12. Capsule Networks (CapsNet): Neural networks designed to overcome limitations of traditional convolutional architectures by encapsulating hierarchical information in capsules.
13. Transformer: Transformers are a type of deep learning architecture that have revolutionized natural language processing and various other sequence-to-sequence tasks by leveraging attention mechanisms for efficient and effective information processing.
14. Radial Basis Function Networks (RBFNs) are artificial neural networks that use radial basis functions as activation functions, making them suitable for applications such as function approximation and pattern recognition.