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. Long Short-Term Memory (LSTM): A variant of RNN that mitigates the vanishing gradient problem and effectively models long-term dependencies.
4. Generative Adversarial Networks (GAN): A framework involving two networks, a generator and a discriminator, competing with each other to generate realistic data.
5. Deep Boltzmann Machines (DBM): Probabilistic generative models with multiple layers of hidden units, capturing complex distributions in unsupervised learning.
6. Autoencoders: Neural networks used for unsupervised learning by reconstructing the input data, often employed for dimensionality reduction or feature learning.
7. Deep Belief Networks (DBN): Stacked networks of restricted Boltzmann machines, used for unsupervised pretraining or feature extraction.
8. Self-Organizing Maps (SOM): Unsupervised learning models that transform high-dimensional data into a lower-dimensional representation while preserving the topology.
9. Variational Autoencoders (VAE): Generative models that utilize a probabilistic encoder-decoder architecture to learn latent representations of data.
10. Temporal Convolutional Networks (TCN): Convolutional neural networks designed for sequence modeling tasks, capable of capturing long-range dependencies.
11. Transformer Networks: Models based on self-attention mechanisms that excel in natural language processing tasks by processing inputs in parallel.
12. Restricted Boltzmann Machines (RBM): Generative stochastic models used for unsupervised learning, particularly in the context of deep learning.
13. Capsule Networks (CapsNet): Neural networks designed to overcome limitations of traditional convolutional architectures by encapsulating hierarchical information in capsules.