

■ Deep Learning Concepts in hierarchy

- Deep Neural Networks
- Activation Functions [Derivative Graph](#) , [Comaprison](#) , [sigmoid Vs Tanh Vs Relu](#)
 - Sigmoid/Logit
 - Tanh
 - Relu
 - Leaky Relu
 - softmax [Blog1](#) [Blog2](#)
- Optimization Algorithms
 - Gradient Descent
 - Stochastic Gradient Descent
 - Momentum
 - RMSProp
 - Adam
- Loss functions [Nice Blog](#)
 - Regression
 - Mean, ordinal, Least Square loss/L1 loss/Quadratic loss (Less robust to outliers)
 - Mean Absolute loss/L2 Loss (More robust to outliers)
 - Huber loss/Smooth Mean Absolute Error (Combination of MSE and MAE with a threshold)
 - Log cosh loss
 - Classification [Blog](#)
 - binary cross entropy loss
 - Categorical cross entropy
- Regularization
 - Dropout
- Sequential learning
 - Recurrent Neural Networks
 - BPTT, TBPTT [Nice answer](#)
 - Long Short Term Memory Networks (LSTMs)
 - Gated Recurrent Unit (GRU)
 - Concepts cum Applications
 - Word2Vec
 - CBOW
 - Skipgram

- Implemented using Hierarchical Softmax, Negative Sampling
 - Glove
- Encoder Decoder Architecture
- Attention Mechanism [Nice Blog](#)
- AutoEncoders (Feature Reduction, Selection) [Blog](#)