* This is my assignment on Andrew Ng's special course "[***Deep Learning Specialization***](https://www.coursera.org/specializations/deep-learning)" This course consists of five courses:
  + [***Neural Networks and Deep Learning***](https://www.coursera.org/learn/neural-networks-deep-learning/home/welcome)
  + [***Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization***](https://www.coursera.org/learn/deep-neural-network/home/welcome)
  + [***Structuring Machine Learning Projects***](https://www.coursera.org/learn/machine-learning-projects/home/welcome)
  + [***Convolutional Neural Networks***](https://www.coursera.org/learn/convolutional-neural-networks)
  + [***Sequence Models***](https://www.coursera.org/learn/nlp-sequence-models)

**Deep Learning**

 Neural Networks and Deep Learning

 Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

 Structuring Machine Learning Projects

 Convolutional Neural Networks

 Sequence Models

**Deep Learning - deeplearning.ai**

Coursera Deep Learning Course by deeplearning.ai projects

**Course 1. Neural Networks and Deep Learning**

1. Week1 - Introduction to deep learning
2. Week2 - Neural Networks Basics
3. Week3 - Shallow neural networks
4. Week4 - Deep Neural Networks

**Course 2. Improving Deep Neural Networks Hyperparameter tuning, Regularization and Optimization**

1. Week1 - Practical aspects of Deep Learning - Setting up your Machine Learning Application - Regularizing your neural network - Setting up your optimization problem
2. Week2 - Optimization algorithms
3. Week3 - Hyperparameter tuning, Batch Normalization and Programming Frameworks

**Course 3. Structuring Machine Learning Projects**

1. Week1 - Introduction to ML Strategy - Setting up your goal - Comparing to human-level performance
2. Week2 - ML Strategy (2) - Error Analysis - Mismatched training and dev/test set - Learning from multiple tasks - End-to-end deep learning

**Course 4. Convolutional Neural Networks**

1. Week1 - Foundations of Convolutional Neural Networks
2. Week2 - Deep convolutional models: case studies
3. Week3 - Object detection - Papers for read: [You Only Look Once: Unified, Real-Time Object Detection](https://arxiv.org/pdf/1506.02640.pdf), [YOLO](https://arxiv.org/pdf/1612.08242.pdf)
4. Week4 - Special applications: Face recognition & Neural style transfer - Papers for read: [DeepFace](https://www.cs.toronto.edu/~ranzato/publications/taigman_cvpr14.pdf), [FaceNet](https://www.cv-foundation.org/openaccess/content_cvpr_2015/papers/Schroff_FaceNet_A_Unified_2015_CVPR_paper.pdf)

**Course 5. Sequence Models**

1. Week1 - Recurrent Neural Networks
2. Week2 - Natural Language Processing & Word Embeddings
3. Week3 - Sequence models & Attention mechanism

*source from****Andrew Ng****'s*[*Deep learning*](https://www.coursera.org/specializations/deep-learning)*course on Coursera*