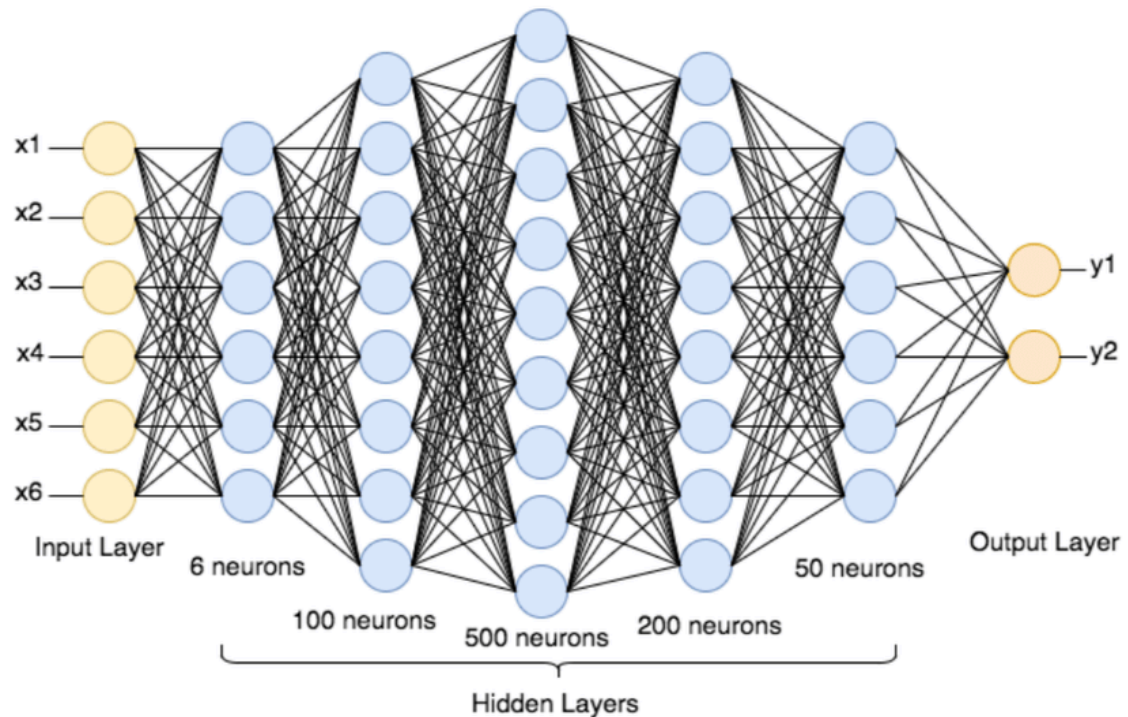
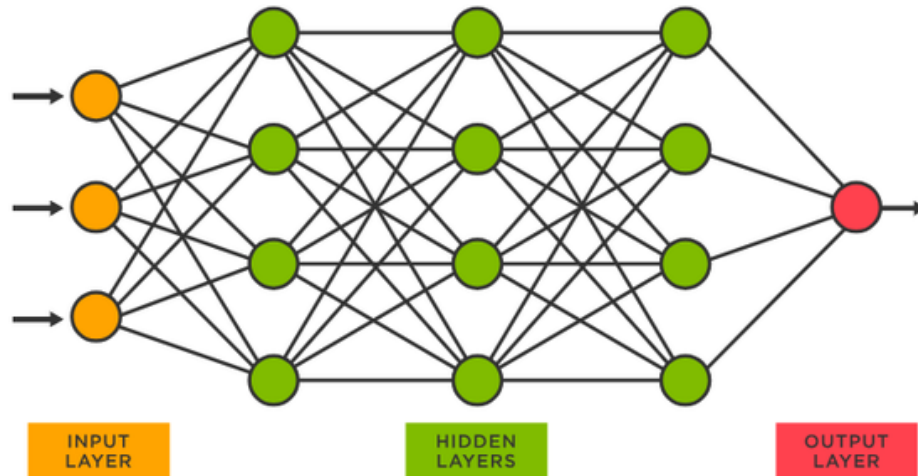


Deep Learning for Perception

Lab # 4

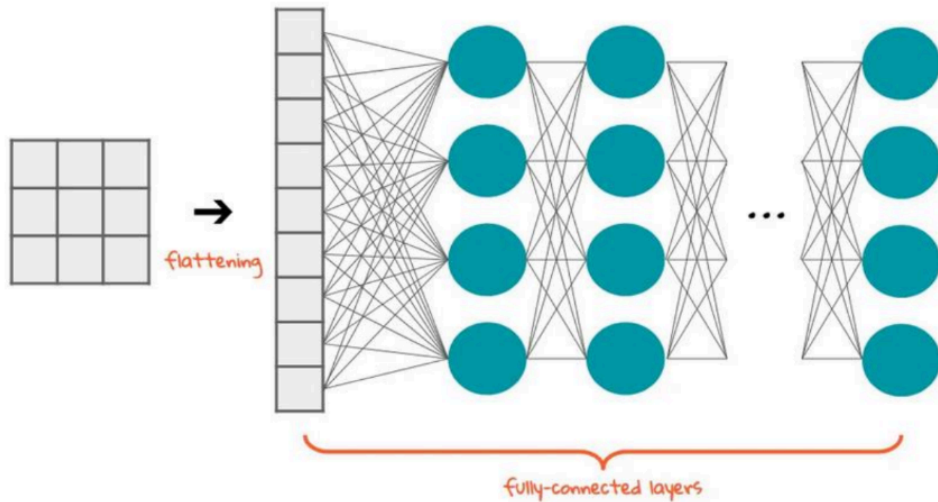
1. Attached notebook is for your reference to Keras introduction. More examples can be found here <https://keras.io/examples/>.

Build the model for the given neural networks. Also calculate the number of parameters by hand and then verify it through coding. Use heart disease dataset which we used in previous labs and calculate the accuracy on below neural networks.



2. MNIST image classification:

Build a deep neural network with 5 hidden layers and 5 neurons in each layer to classify the MNIST digits. Output layer will have 10 neurons. Use softmax activation for the last layer. You don't need to process your images. Just flatten the raw image and pass that array to your neural network.



3. Kaggle Competition: Titanic - Machine Learning from Disaster

<https://www.kaggle.com/competitions/titanic/overview>

You have to login on Kaggle and understand this problem. Use Deep Neural Networks to solve this problem. You are open to use any number of layers, neurons and hyperparameters. Submit the link of your notebook and screenshot of the leaderboard.