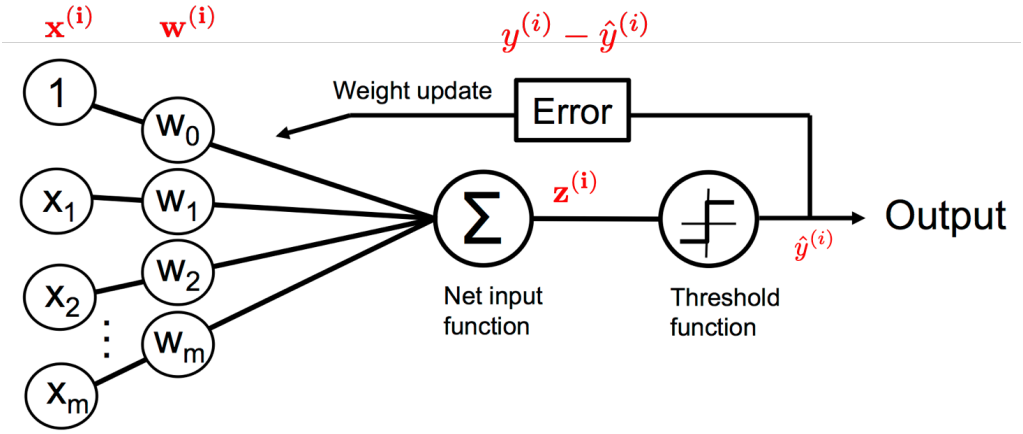
Final Project

For the small classic dataset Iris (https://archive.ics.uci.edu/dataset/53/iris) from UCI machine learning repository, consider to use a simple perceptron model to build a classifier for evaluation. We use all four parameters (sepal length, sepal width, petal length, petal width) for model features to classify two species (Setosa, Versicolor).



1. Use IEEE 754 binary16 format for all the numbers in the model to build a classifier and evaluate the performance. (for both training and inference)
2. Use signed 2's complement fixed-point format for all the numbers in the model to build a classifier with comparable performance to the classifier in 1. List the format of all parameters used in your model. (for both training and inference)
3. Optimize the model to get the best speed for model inference.
4. Optimize the model to get the smallest cost for model inference.

