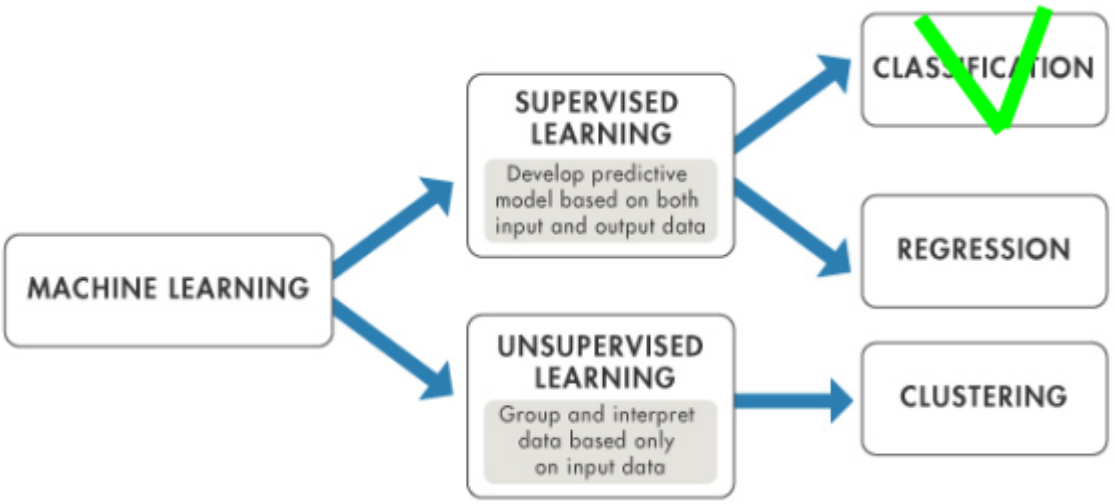
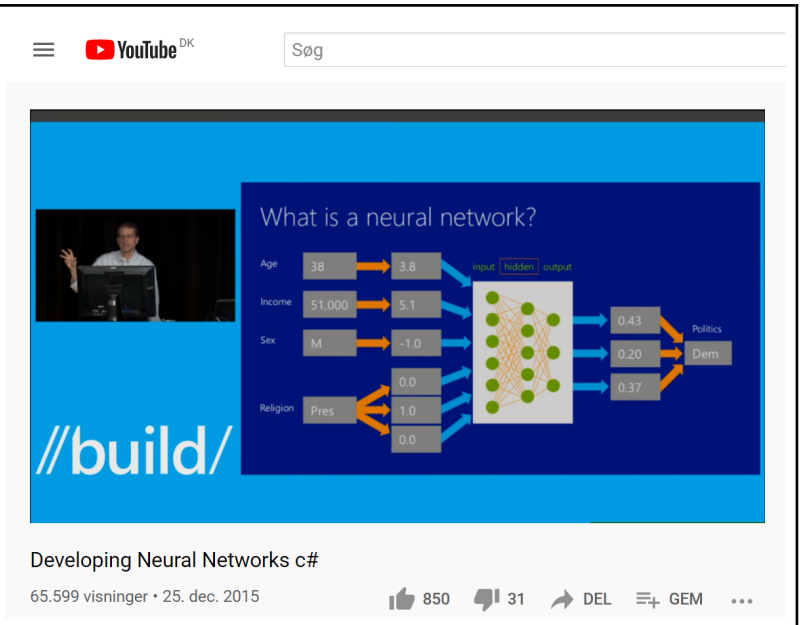
[2021.09] DNN Simulator opgave (Classification) (James McCaffrey)



We use the same tool as in the previous exercise. See the improved DNN Simulator video (12 min) which demonstrates a NAND gate. Previous video: DNN Simulator Intro 7 min. .	

Video

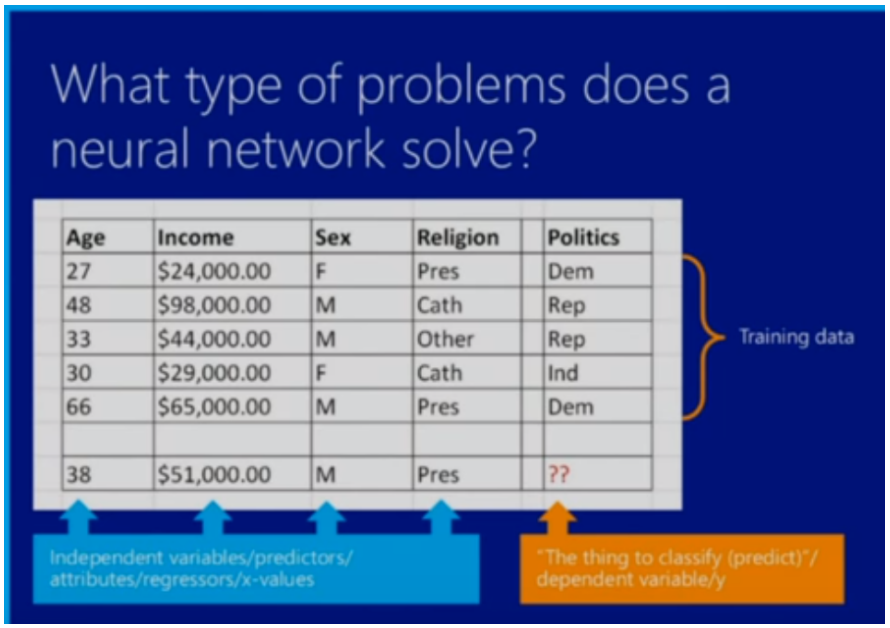
Watch the first 35 min. from this video. This will help you understand the problem.

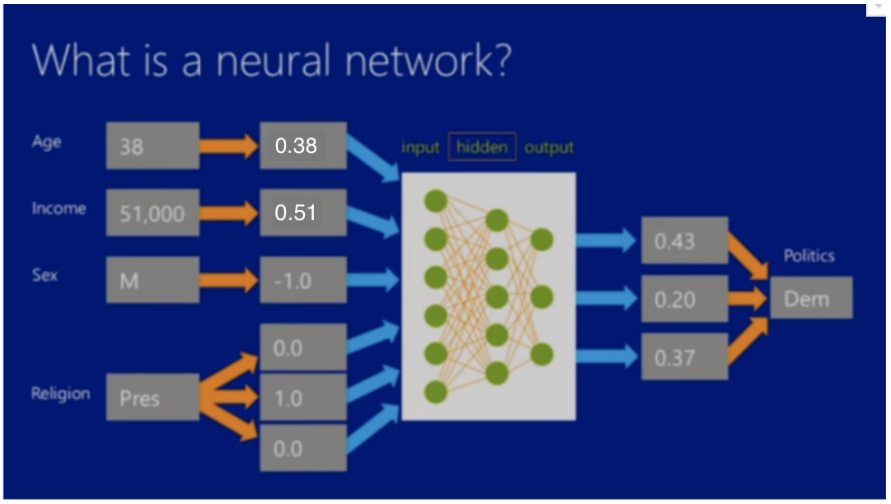


DATA

Training data:
The first five rows from this image. Use them to train the model.

Test data:
The last row. Use it to make a prediction, after the model has been trained.

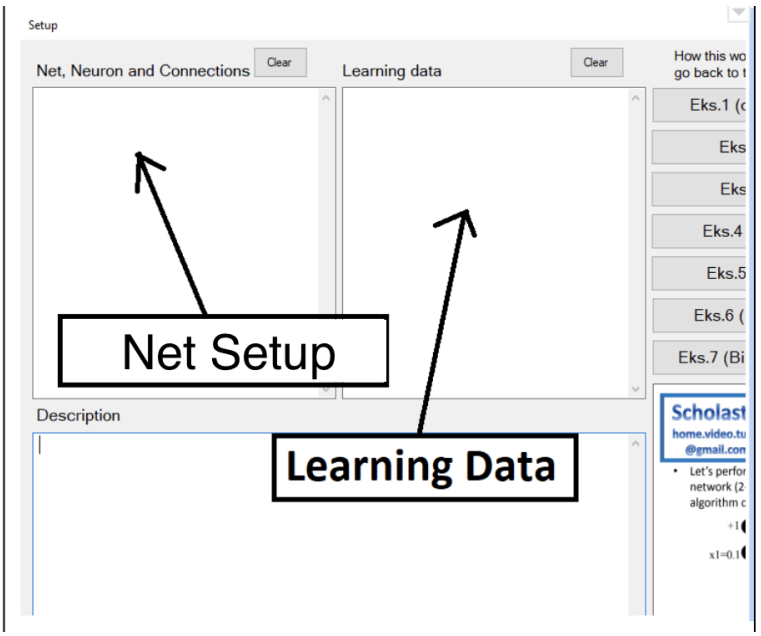


Data Preparation You have to convert the raw data to numbers between -1.0 and 1.0. Note that the Sex category has been changed to -1.0 and 1.0 for Male, Female respectively. Also the Religion category has been changed to three subcategories (Dem, Rep, Ind) As you can see, the whole dataset is now more similar in range.	 *(Note: Here, Age and Income have been changed from 3.8 and 5.1 respectively from the McCaffrey video.)*

Exercise 1:

Insert learning data from the previous step.

Also insert values for a Net, which correspond to the learning data.



Exercise 2:

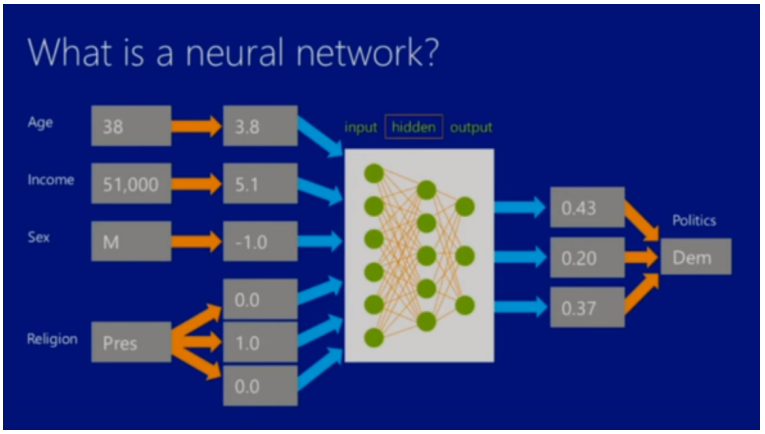
Make predictions:

Test if the model works. You can click on a neuron in the Simulator and insert data. Do this for all the input neurons (except the Bias)

When everything is inserted, press the “Forward Propagation” button, and then you can see what the model predicts on the far right of your outputs.

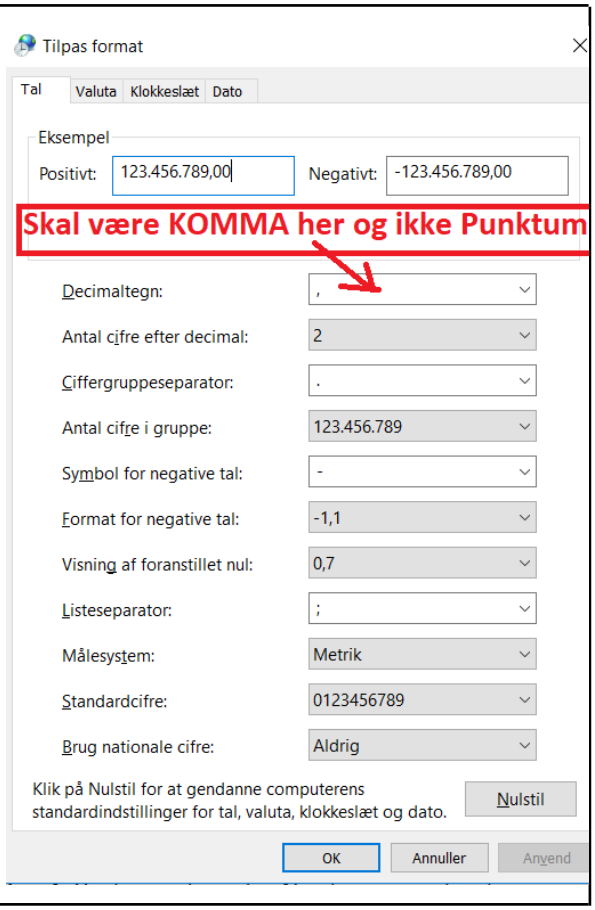
Input data that you need to predict is (Age, Income, Sex and Religion).

Question: Does your solution also give "Dem" as the answer?



Problems with the Simulator

Sometimes the simulator does not work properly, it is as if the numbers get too big. This is due to the number format you use on your Windows.
Here is a how to change it ->

The important one here is Decimal characters, it should be a comma and not a period.

Here on the right you see my setup and it works fine