Technische Hochschule Ingolstadt, M-APE, Prof. A. Schiendorfer Lukas Lodes M.Sc.

Intro to AI and Neural Networks (Summer 2022)

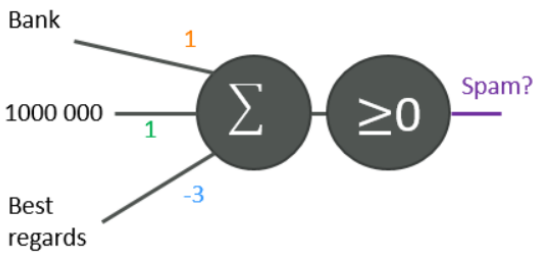
Assignment 01

Exercise 1 ***(Python Primer)***

This exercise will familiarize you with the basics of Python programming. You can either use `https://colab.research.google.com/` or setup your own environment using `https://www.anaconda.com/`. We recommend to use at least Python 3.6.[1] This primer will work with plain Python only, we will ramp up on libraries like NumPy or PyTorch in later exercises.
Test the self-graded environment at `https://stepik.org/course/94683` to get feedback on your programs.

- Work through our prepared Jupyter notebook `Python-Primer.ipynb`. Fill in the small coding exercises written in boldface. For the other cells, make an educated guess what you expect the output to be and then check your assumptions by executing the cells.
- Implement a function `linearThresholdUnit` that takes a list of x-values and a list of w-values, calculates the weighted sum and returns 1 if that sum is greater than or equal – otherwise 0. See also the last challenge on Stepik.

  This was used for our toy spam detector:



[1] If you decide to use Python locally, make sure you prepare a conda (recommended) or pip virtual environment to install all required dependencies for this class. We can recommend PyCharm or VS code as IDEs for your local environment.