**Fundamental of applied Machine Learning**

**Homework 1: improving matches from a dating site with kNN**

In our first homework you are going to implement example 2.2 (improving matches from a dating site with kNN) from the “Machine learning in Action” textbook in Python (No worry if you do not want to buy the book, I provide scanned copy of those pages that we need).

Your task is very straightforward, but it is a good starting point to see how easy is to implement Machine learning algorithms!

You just need to write all the codes for that example from the book in Jupyter notebook and run them to make sure they are working. (If you copy/paste them you might see a few errors and this is your job to correct them!)

At the end, you should send me one Jupyter notebook (.ipynb file) which has just **one cell**, and by running that single cell, it should ask the user those 3 questions (Frequent flyer miles, playing video game and consumed ice creams) and based on the input answers it should classify that person into one of those 3 groups.

**Note 1)** You do not need to test your classifier and find the error rate for the purpose of this HW.

**Note 2)** You should decide which dataset is usable in this HW (datingTestSet vs. datingTestSet2)

**Note3)** I provided the source codes in a text file called sources-HW1.txt, so you do not need to write them again, just copy/paste! (remember to import necessary packages such as NumPy)

**How to turn in your HW:** Email me your “Your Full Name.ipynb” file at [mjafa003@ucr.edu](mailto:mjafa003@ucr.edu).

**Subject of your email**: “Homework 1 ML-Your Full Name “

**Grading this HW:** For this homework the possible points you might get is 0, 5 and 10 (0 for almost nothing, 10 for doing everything perfectly as described, and 5 for trying to do the job, but not completely successful)

**Deadline:** Tuesday July 10 @ 3:00 pm.