Assignment 4: 숙제 4

AI+X: Deep Learning

DUE: Nov. 19 *Submit in Class*

(Learning)

This is another group assignment.

This is the next step for your lottery number assignment.

**Task-1: Report your group members (Same as your last group).

Member 1: Name, Major, Student ID
Member 2: Name, Major, Student ID
Member 3: Name, Major, Student ID
Member 4: Name, Major, Student ID

**Task-2: This time, please add not-winning (fake) numbers to each round to your modified lottery dataset. You will be adding '0' for lose for every round: one for each round. So your new dataset should be double. Your lottery data set would look like the following:

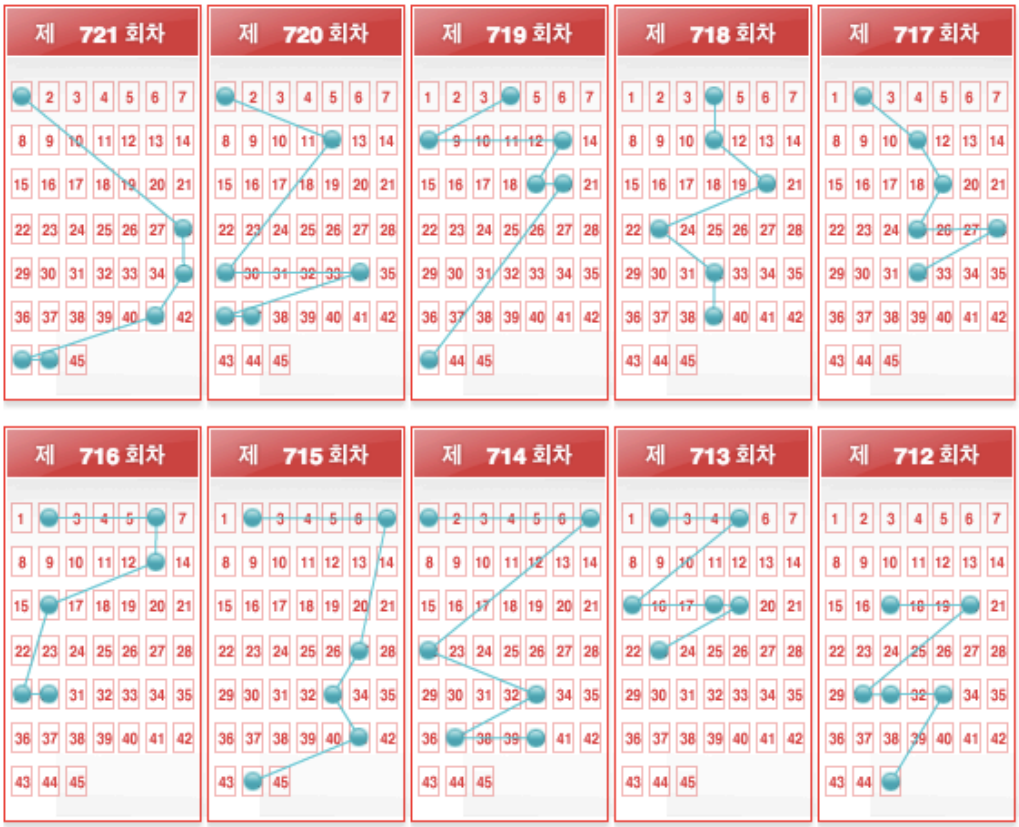
round, date, first, second, third, fourth, fifth, sixth, bonus, win
663,2015.08.15,3,5,8,19,38,42,20,1
663,2015.08.15,1,2,3,4,5,6,7,0

Please print the first 20 lines of your modified data set (including csv header) for submission. If you have a source code for doing this, please print them out for submission.

**(BONUS, you don't have to do this. It's up to you) Task 3: K-mean clustering – Use any combination of features in your lottery.csv to group all weekly rounds. For example, you can use the vectors of 'first' and 'second' to create 2 clusters (K=2) and provide a clustering graph like the below scikit-learn sample source code. Another example is to use the average of all 7 digits to create N-clusters. Print out your K-mean analysis source code that creates a cluster figure (just one graph). Within your code (comment line), please explain which features and how many clusters you use.

Overview - http://scikit-learn.org/stable/modules/generated/sklearn.cluster.KMeans.html
Sample source code - http://scikit-learn.org/stable/auto_examples/cluster/plot_cluster_iris.html

**Task-4: Give me your prediction for next week's winning number. You could verify your number using Task-3. Please explain how you would do it briefly in your own words; One paragraph should be fine. Or something like the following could be a good candidate for your prediction ideas:



SUBMISSION:

Do the above four tasks. Print them out: Task-1, Task-2, and source code and one graph from Task-3. And print your winning number from Task-4! Good luck!

DO NOT WORRY. We will discuss more in class.