Assignment 3 and Class instructions:

Due date: You should submit a design proposal by midnight 11/20/2016 and the final deliverable on 3rd December. Deliverables for 3rd December includes:

- Design and implementation report
- Fully functional web application with source code
- 5 minute /team in class demo on 3rd December.

Fully functional application

Goal: To build out a web service for the models you built out in the Midterm

Summary: Now that you have had firsthand experience in building and evaluating models, your goal now is to deploy your model as a service. You will use the Azure Machine Learning studio to create the web service and build a user interface so that you can invoke the web service. Note that it supports both R and Python but you will have to determine how to deploy your best regression, classification and clustering models.

Tasks:

- Based on the model for "all buildings" (not models built for individual 78 buildings) but the general model that applies to all buildings build webservices for :
    - 4 regression models
    - 4 classification models
    - 2 clustering model
- You can have 10 separate webservices or have one each for the 3 types of models or have just 1 webservice and use the rest api to invoke a particular model. It is a design chose.
- Your rest api should take a (date and time, and expected temperature and model(regression, classification, clustering) as input from a web interface. Your azure machine learning studio experiment should process the input into feature vector and run the deployed model.
- The output is the expected to be :
    - 4 regression predictions if regression is chosen
    - 4 classification predictions if classification is chosen
    - 2 clustering predictions if clustering is chosen
- You have to design the end to end pipeline to create the rest api and the web application to invoke the rest api. You won't need any data since you have already built your models in R/Python in your midterm
- You should deploy the models using the Azure machine learning API
- Check https://docs.microsoft.com/en-us/azure/machine-learning/machine-learning-extend-your-experiment-with-r and https://docs.microsoft.com/en-us/azure/machine-learning/machine-learning-custom-r-modules for instructions on using R or https://docs.microsoft.com/en-us/azure/machine-learning/machine-learning-execute-python-scripts for python