CE 88 Midterm

Bike Sharing

In this midterm you will explore the data and build a forecast for the total number of hourly bike rentals in the bike sharing network of Washington, D.C.

The data. The dataset (**bikes_2011.csv**) provided to you is hourly bike rental data of 2011. The following variables are available:

- date: date string (m/d/y)
- year: year (0: 2011, 1:2012)
- month: month (1 to 12)
- hour: hour (0 to 23)
- holiday: if the day is a holiday or not
- weekday: day of the week, 0 (Sunday) to 6 (Saturday)
- working: 1 if a day is neither weekend nor holiday, 0 otherwise.
- weather_type :
    - 1: Clear, Few clouds, Partly cloudy
    - 2: Mist, Cloudy
    - 3: Light Snow, Thunderstorm
    - 4: Heavy Rain, Ice Pallets, Thunderstorm, Mist, Snow, Fog, Apocalypse
- temp: temperature in Celsius.
- feels_like: “feels like” temperature in Celsius (accounting for wind chill and humidity)
- humidity: humidity
- windspeed: wind speed

Finally, the dependent variable is:

- count: total count of bikes rented in a given hour

The Problem. You will be asked to provide a forecast of the number of hourly bike rentals for a number of days in 2012. The exact days (along with all the variables) will be released to you in 1 week. You will then have 3 days to submit your forecast. Meanwhile, use this time to explore the data and prepare your forecasting tools. Bikeshare.ipynb provides basic functions to get you started.

Good luck!