

MGMT 3332 – FALL 2014- CASE 1 - Jackson Urgent Care service

Jackson Urgent Care service opened in early 2012 to provide health care service to patients who needed to see a physician urgently, but did not have a condition that called for an emergency. Since the number of patients that came every day varied, Martha Jones, the manager of Jackson, found it difficult to schedule staff. The service opened from 8 a.m. to 8 p.m. every day. Often staff had to stay longer due large number of patients waiting for service.

She approached Gary Adams, a recent graduate of UHD who had received an “A” in MGT 3332, to help her out to do a better job of forecasting. Gary shuffled over his old notes and thought he could use what he had learned in MGT 3332. He recalled that in such cases Time Series data could be useful. So, he asked Martha to provide him the recent patient data.

Martha went back to her office and compiled the past data as shown in Table below.

<u>Date</u>	<u>No. of Patients</u>	<u>Date</u>	<u>No. of Patients</u>
8/1/2014	63	8/16/2014	80
8/2/2014	70	8/17/2014	79
8/3/2014	65	8/18/2014	88
8/4/2014	72	8/19/2014	88
8/5/2014	82	8/20/2014	85
8/6/2014	70	8/21/2014	90
8/7/2014	75	8/22/2014	72
8/8/2014	81	8/23/2014	95
8/9/2014	70	8/24/2014	88
8/10/2014	75	8/25/2014	98
8/11/2014	65	8/26/2014	95
8/12/2014	98	8/27/2014	99
8/13/2014	78	8/28/2014	89
8/14/2014	80	8/29/2014	95
8/15/2014	82	8/30/2014	98
		8/31/2014	96

- A. Plot a scatter diagram of the above data. Do you think time series models will be useful for forecasting in such a situation?
- B. Determine a linear trend line for forecasting. Use your trend equation to forecast for the date of your birthday in month of September. (If your birthday is 5th November, forecast for 5th September. If your birthday is 25th February, forecast for 25th September).
- C. Assume the forecast on 8/21/2014 was same as the actual, forecast for September 1, using exponential smoothing method. Use $\alpha=0.3$ if your birthdate is an odd number; use $\alpha = 0.6$, it is an even number. Use Excel for this exercise.
- D. What did you learn from this case analysis?