**WEEKLY CHALLENGE 2**

1. **Exploratory Data Analysis** (EDA) is an approach/philosophy - not a set of techniques, but an attitude/philosophy about how a data analysis should be carried out. EDA is an approach to data analysis that postpones the usual assumptions about what kind of model the data follow with the more direct approach of allowing the data itself to reveal its underlying structure and model. EDA is not a mere collection of techniques; it is a philosophy as to how we dissect a data set; what we look for; how we look; and how we interpret. EDA employs a variety of techniques (mostly graphical) to

* maximize insight into a data set;
* uncover underlying structure;
* extract important variables;
* detect outliers and anomalies;
* test underlying assumptions;
* develop parsimonious models; and
* determine optimal factor settings.

Most EDA techniques are graphical in nature with a few quantitative techniques. The reason for the heavy reliance on graphics is that by its very nature the main role of EDA is to open-mindedly explore, and graphics gives the analysts unparalleled power to do so, enticing the data to reveal its structural secrets, and being always ready to gain some new, often unsuspected, insight into the data.