**ANALYTICS TEST**

The file data\_sample.csv contains codified features of informational messages that are being produced by a subset of our servers. Each entry (row) corresponds to a particular informational message that we have received; it contains the UTC timestamp (datetime column) and 3 features (application, node-name and category). Messages themselves are excluded from the dataset.

You are being asked to produce a high-level summary of any regularly occurring patterns that you may find in this dataset.

Being an open-ended question, it is entirely up to you what you want to look for (or how you choose to conduct your analysis). With that in mind, the following tips about messages may come in handy:

* We would expect to see different patterns of activity of applications, nodes and categories across different hours of the day (due to markets being either opened or closed), as well as across the business days / weekends; hence it may be wise to try aggregating this data in a number of different ways
* We are equally interested in patterns associated with any of the 3 features, however bear in mind that most applications would only run on a small sub-set of nodes (our features are highly correlated), hence there is likely to be an overlap between patterns
* Patterns that can explain / “tie together” more messages are of greater interest to us
* Both highly regular or sporadic (uncharacteristic) patterns are of interest

You are encouraged to produce a number of graphs to depict your findings.

Please feel free to use the analysis tool or a language of programming which you think would be most suitable for the task. If you are submitting code, please include a list of any dependencies that will be required to run it. Use of Python is encouraged, but is not mandatory.