**Point72 MI Data - Analytics Case Study:**

You are given two types of data:

* 311 Service requests: Includes all requests from 2010 to Present. Note that this data set is extremely large, and it is unlikely that you will be able to read it wholesale, into memory. Think for a while on the best way to overcome this issue.
* Weather: Includes a variety of features, such as precipitation, temperature, wind speed etc., from stations all around NY State.

The goal of this project is to predict the daily 311 inbound calls for the next 7 days and determine if weather has any impact on these calls. As you go about constructing your prediction ensure that you thoroughly explore both datasets. Your results should be summarized in a self-contained presentation that will be judged on the following criteria:

* Exploration and understanding of both datasets, i.e. how did you deal with aberrations in the data, what patterns did you notice and what could be inferred from these.
* Incorporation of learnings from the exploration phase into the models you constructed.
* Appropriateness of models used and best practices around training and testing.
* Coherence of presentation and ability to visualize/present your findings.

If you are selected for an on-site interview you will be given 30 minutes to take the Analytics team through your presentation and explain your thought process in more detail. Be prepared to answer questions about the exploration/modelling decisions you made and possible extensions to your work.

**Note: The presentation should be a summary of your exploration and findings in slide format. Please do not format your presentation as an ipython notebook, block of code, or text heavy write up.**

Data:

Weather data attached

311 service requests for NYC

<https://urldefense.proofpoint.com/v2/url?u=https-3A__data.cityofnewyork.us_Social-2DServices_311-2DService-2DRequests-2Dfrom-2D2010-2Dto-2DPresent_erm2-2Dnwe9&d=DwIFAg&c=f5Q7ov8zryUUIGT55zpGgw&r=jIZzOd86f7YSQXxq2tMD7ATygBhJ0HZYEV4xj1ADKFo&m=XtqTUf12UGXvf7S7CJlxjRPJ6cHwnKfmMWr1VWPmlsg&s=rPHq3WjwLtzv7zkJyE_JHLWdnf6R5CEd94R4ZKBSemc&e=>

We recognize that there are many approaches to solving this problem and you may try several before arriving at a solution you feel comfortable with. Please document all approaches that you tried.  
Once you feel satisfied with your solution, please send your code (in .py or ipython notebook format), presentation (in .pdf format), and any other relevant material to [Point72CandidatesInvestmentIdeas@point72.com](mailto:Point72CandidatesInvestmentIdeas@point72.com) (without anyone else cc’ed) with the subject

MI Data – Analytics Case Study for NAME

and put the following language in the body of the e-mail:

“This project does not contain material non-public information and does not breach confidentiality restrictions from a current or previous employer.”