Data Science PROJECT

Client: ABC Tech | Category: ITSM - ML

Project Ref: PM-PR-0012

Business Case:

ABC Tech is an mid-size organisation operation in IT-enabled business segment over a decade. On an average ABC Tech receives 22-25k IT incidents/tickets , which were handled to best practice ITIL framework with incident management , problem management, change management and configuration management processes. These ITIL practices attained matured process level and a recent audit confirmed that further improvement initiatives may not yield return of investment.

ABC Tech management is looking for ways to improve the incident management process as recent customer survey results shows that incident management is rated as poor.

Machine Learning as way to improve ITSM processes

ABC Tech management recently attended Machine Learning conference on ML for ITSM.
Machine learning looks prospective to improve ITSM processes through prediction and automation. They came up with 4 key areas, where ML can help ITSM process in ABC Tech.

1. Predicting High Priority Tickets: To predict priority 1 & 2 tickets, so that they can take preventive measures or fix the problem before it surfaces.
2. Forecast the incident volume in different fields , quarterly and annual. So that they can be better prepared with resources and technology planning.
3. Auto tag the tickets with right priorities and right departments so that reassigning and related delay can be reduced.
4. Predict RFC (Request for change) and possible failure / misconfiguration of ITSM assets.

Data Set Fields:

Total of about 46k records from year 2012,2013,2014

Data needs to be queried from MYSQL data base (Read Only Access)

Host: 18.136.56.185
Port: 3306
Username : dm_team
Password: dm_team123#

CI_Name	SUB000508
CI_Cat	subapplication
CI_Subcat	Web Based Application
WBS	WBS000162
Incident_ID	IM0000004
Status	Closed
Impact	4
Urgency	4
Priority	4
Category	incident
KB_number	KM0000553
Alert_Status	closed
No_of_Reassignments	26
Open_Time	05/02/2012 13:32:57
Reopen_Time	
Resolved_Time	04/11/2013 13:50:27
Close_Time	04/11/2013 13:51:17
Handle_Time_hrs	3871,691111
Closure_Code	Other
No_of_Related_Interactions	1
Related_Interaction	SD0000007
No_of_Related_Incidents	2
No_of_Related_Changes	1
Related_Change	C00000056

PRIORITY Matrix

		Urgency					
		1	2	3	4	5	5 - very low
Impact	1	**1**	**2**	**3**	**3**	**3**	**3**
	2	**2**	**2**	**2**	**3**	**3**	**4**
	3	**2**	**2**	**3**	**3**	**4**	**4**
	4	**3**	**3**	**3**	**4**	**4**	**4**
	5	**3**	**3**	**4**	**4**	**5**	**5**