Project Report of my Capstone Project at ClientTrack and EMC Corporation

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Executive Summary

This Capstone Project was executed at ClientTrack and EMC Corporation. I was employed as a Software Engineer Intern at ClientTrack and my main responsibilities as an intern were to understand the ClientTrack value chain and learn their software. By the end of this project, I was able to understand the SDLC of ClientTrack and learnt to use their software successfully.

At EMC Corporation, I was employed, as a Data Analytics Intern and my main responsibilities were to gather requirements, generate key metrics and present my analysis to the leadership team. By the end of this project, I had successfully finished two major projects at EMC, learnt new technologies and made some great contacts.

Project Details

ClientTrack

ClientTrack is a leading Case Management solution designed to advance the missions of health, human and social service organizations. ClientTrack is highly configurable and designed to gather, use and report client information with ease. ClientTrack helps organizations improve efficiency in day-to-day tasks, such as intakes, assessments, determining eligibility, case notes, tracking client progress, measuring outcomes, providing referrals, and more.

Role
Software Engineer Intern

Technical Skills
The project demanded following technical skills:
- ✓ SQL
- ✓ SQL Server Reporting Services
- ✓ ClientTrack Software

Project Objective & Tasks
Following were my project tasks at ClientTrack:
- ✓ Understand the ClientTrack value chain and its social impact

- ✓ Learn how to integrate a new organization in the ClientTrack software
- ✓ Develop reports for the new and existing organizations in the ClientTrack system
- ✓ Resolve the service requests raised by the customers

Methods

I used following methods to learn their software and system:
- ✓ Understood the project and ClientTrack software by shadowing implementation engineers and development staff on a daily basis
- ✓ Met with business analysts to understand customer requirements and implemented them successfully
- ✓ Completed all the standard ClientTrack foundation training sessions available on their intranet
- ✓ Meet with the team on a weekly basis to provide them a status update so that they can help me focus on important areas of the software

Results
- ✓ By the end of the project, I was able to integrate a new customer/organization successfully into ClientTrack's environment
- ✓ Created several internal reports for ClientTrack's leadership team
- ✓ Successfully handled and closed the service requests raised by their customers
- ✓ Built good contacts at ClientTrack

Lessons Learned
- ✓ Learned about the ClientTrack organization, their market area and how their services affect the social services organizations
- ✓ Learned the SDLC at ClientTrack by understanding how the requirements are gathered, implemented and released
- ✓ Learned how to use their software, create forms in it and import the SQL reports into it

EMC Corporation

EMC is a global leader in enabling businesses and service providers to transform their operations and deliver information technology as a service (ITaaS). Fundamental to this transformation is cloud computing. Through innovative products and services, EMC accelerates the journey to cloud computing, helping IT departments to store, manage, protect and analyze their most valuable asset — information — in a more agile, trusted and cost-efficient way.

Role
Data Analytics Intern

Responsibilities
Following were my responsibilities at EMC:
- ✓ I was a part of Customer Services Business Operations team of Information Intelligence Group (IIG) at EMC Corporation
- ✓ I was mainly into designing, developing and maintaining ongoing metrics, reports, analyses, dashboards, etc., to drive key business decisions and communicate key concepts to the leadership team.
- ✓ Create user-friendly dashboards like L2 tasks metrics, Monday morning dashboard, Individual Contributor Metrics, Root Cause Analysis, Backlog Manager to drive key business decisions and communicate area of focus to the engineers and managers to efficiently manage the service requests.

Technical Skills
The project demanded following technical skills:
- ✓ SQL
- ✓ Tableau Desktop 8.1
- ✓ Greenplum Database

L2 Project Objective & Tasks
L2 Tasks at EMC are the second level support service requests, which are handled by Subject Matter experts only if the Technical Support Engineer is not able to handle them because of lack of product expertise.
In this project, I had to generate a L2 (Second level support) dashboard, which would have metrics like backlogs, number of Service Requests (SR) created/closed, and dashboard for archived data for a specified time period.

Methods

I used following methods to generate L2 Dashboard:
- ✓ Gather requirements from project managers and Geo leads of various regions that manage L2 engineers. L2 engineers would be SME or DSE.
- ✓ Identify data in the Greenplum on the basis of collected requirements
- ✓ Generate data extracts by writing queries and automate their generation on a daily basis
- ✓ Use Tableau to generate various metrics from the data extracted from Greenplum
- ✓ Conduct meetings with different regions like EMEA, APJ, NA etc. to present the reports and how to use them

Key Observations

Following are the observations, which I identified while analyzing data of L2 tasks:
- ✓ **Identified loopholes in the workflow of L2 tasks**
  I observed that the SME who is responsible for handling a L2 task in the system was actually not handling it and was assigning it to another SME (verbally) for reasons like lack of expertise, some other high priority work, etc. This led to incorrect information on the dashboards on the basis of which managers & leadership team take decisions.
- ✓ **Identified a bug in the data extracts which was previously being used by the team and corrected it**
  The SQL query being used to generate the main extract had a bug on the close date of a SR. It was calculating all the close dates as NULL, which led to mismatch in numbers on the count of open and close SRs
- ✓ **Identified that there is a need for the queues to be updated**
  IIG queues were not updated since a long time because of which the service calls were getting diverted to TSE's with mismatching product expertise. This led to increase in the number of backlogs per month, as the TSE would take a long time to resolve the issue, as his/her product expertise did not match with the type of SRs he/she was being assigned to.

Deliverables
L2 Dashboard
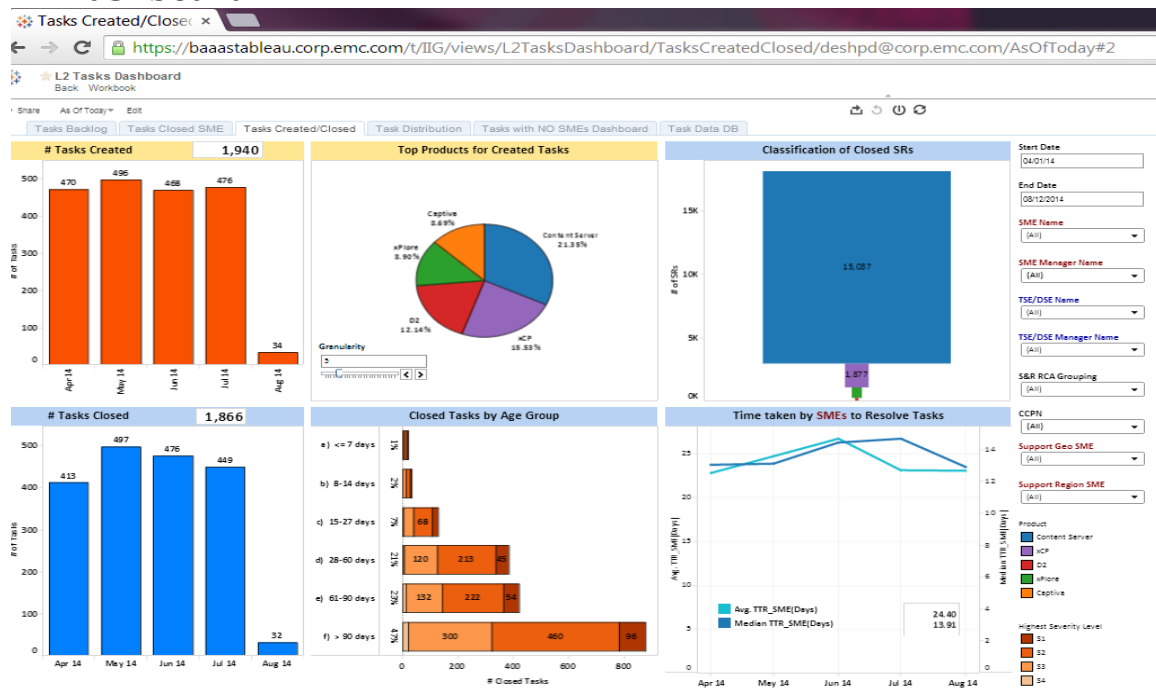
Manager Hotlist Project Objective & Tasks

In this project, I had to generate a manager hotlist dashboard, which highlights the critical SRs to the managers and indicates the reason of its criticality to them so that they can take appropriate action.

Methods

I used following methods to generate Manager Hotlist Dashboard:
- ✓ Identify data in the Greenplum on the basis of gathered requirements from the leadership team
- ✓ Generate data extracts by writing queries and automate their generation on a daily basis
- ✓ Use Tableau to generate the dashboard and highlight the reason for the SR's criticality
- ✓ Schedule the reports so that managers receive them every Monday

Deliverables
Manager Hotlist Dashboard

Critical Open SRs (IIG)

https://baaastableau.corp.emc.com/t/IIG/views/IIGHotlistDashboard/CriticalOpenSRsIIG#1

Critical Open SRs (IIG)
Back   Workbook

Help ▼   ★ ▼   Deshpande, Deepti ▼

hare   Remember my changes ▼   Edit

ager Name

Support Geo
(All)

				Critical Open SRs	1,517					

| Number	TSE/DSE Name	CCPN	Day of SR Create Date	SR Last Updated > 7 Days?	SR Duration > 90 Days?	SR Duration (No Eng Egmt) > 28 Days?	SR Duration (No L2 & Eng Egmt) > 15 Days?	Current Severity Level	JIRA Duration > 90 Days	SRE Flag	SR Status	Current Escalation Level
I88652	Cason, Talley S	ApplicationXtender Desktop	8/10/2012	2.5	741.5			S4	723.5		Open - Eng Activity	NA
I52568	Gadhamsetty, Hari Kumar	Content Server	3/20/2013	3.5	519.5			S2	499.5		Open - Eng Activity	De-Escalated
I40354	Fortune, Colin	Content Server	6/19/2013	2.5	428.5			S2	423.5		Open - Cust. Action Req.	De-Escalated
I49088	Shah, Mehul	Documentum Retention Policy Se.	7/12/2013	8.5 ★	405.5			S2	370.5		Open - Cust. Action Req.	De-Escalated
I38586	Lisenkov, Mikhail	Content Server	7/16/2013	2.5	401.5			S2	400.5	✓	Open - Eng Activity	E3
I77026	Washburn, Matthew T	Kazeon ECS	8/9/2013	2.5	377.5	✳	!	S4			Open - Cust. Action Req.	NA
I68634	Savelli, Pietro	Documentum Webtop	8/27/2013	3.5	359.5			S2	302.5		Open - Eng Activity	E3
I04320	Jin, Keith V	Document Sciences xPression Enterpris.	9/16/2013	3.5	339.5			S4	331.5		Open - Problem Re-Creation	NA
I85286	Burri, Bruce W	Document Sciences xPression Enterpris.	9/24/2013	6.5	331.5			S3	211.5	✓	Open - Relief Await Cust Veri.	NA
I53852	Phipps, Michael	Business Activity Monitor	10/11/2013	8.5 ★	314.5	✳	!	S4			Open - Eng Activity	NA
I59962	Soni, Romil	Captiva InputAccel	11/8/2013	2.5	286.5			S2	237.5		Open - Eng Activity	E3
I66366	Satake, Alexandre	Documentum TaskSpace	11/8/2013	8.5 ★	286.5	✳	!	S2			Open - Eng Activity	NA
I10866	Escribano, Rafael	Content Server	11/15/2013	15.1 ★	559.1			S2	533.1		Open - Relief Await Eng	E3
I51826	Singh, Ashish -Contractor	Documentum eRoom	11/26/2013	2.5	268.5			S2	261.5		Open - Eng Activity	E4
I20410	Fontaina, Antonio	Documentum Digital Asset Manager	12/4/2013	8.5 ★	260.5			S2	46.5		Open - Relief Await Cust Veri.	NA
I44488	Paci, Andrea	Content Server	12/5/2013	2.5	259.5			S3	220.5		Open - Eng Activity	De-Escalated
I17262	Fontaina, Antonio	Content Server	12/17/2013	23.5 ⬇	247.5			S2	247.5		Open - Cust. Action Req.	NA

Lessons Learned

- ✓ Exposed to Data Analytics field in real time environment and learnt the different phases of Data Analytics
  - o Requirements Collection
  - o Data Access
  - o Data Identification
  - o Data Visualization
  - o Business Analytics
  - o Knowledge Transfer
- ✓ Understood the life cycle of Business operations team
- ✓ Learnt new technologies like Tableau and Greenplum
- ✓ Learnt and understood the process of collecting requirements effectively from the customer
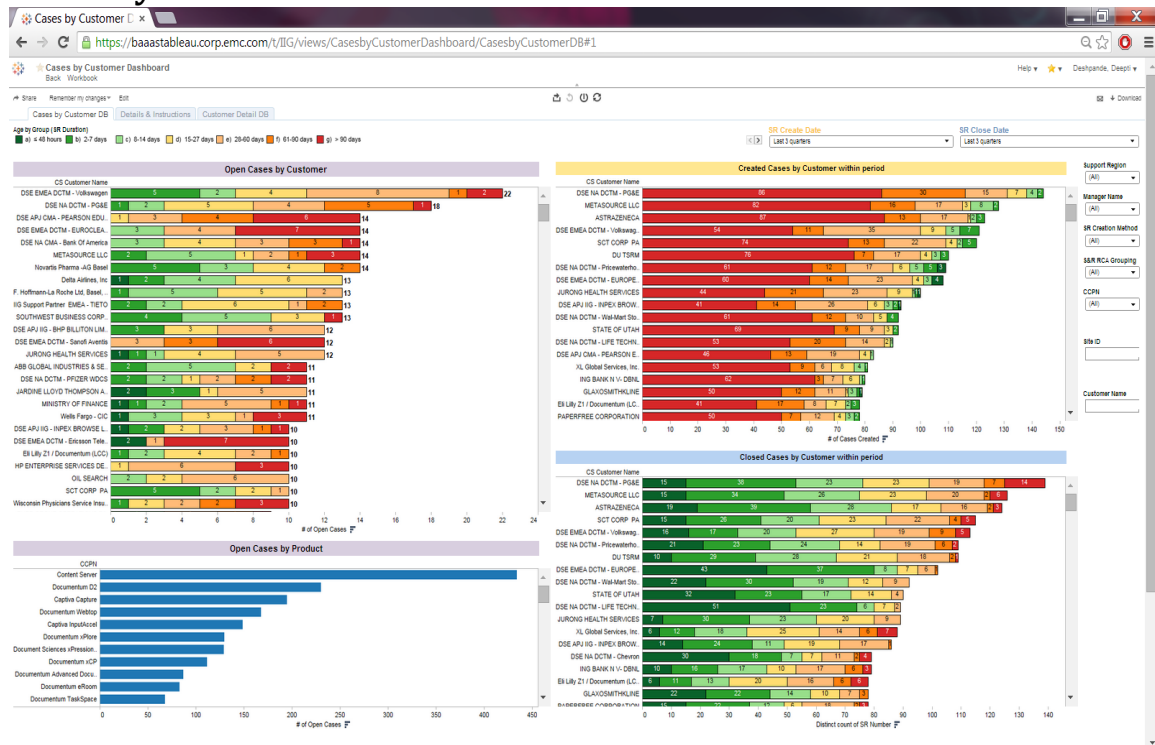
Other Deliverables

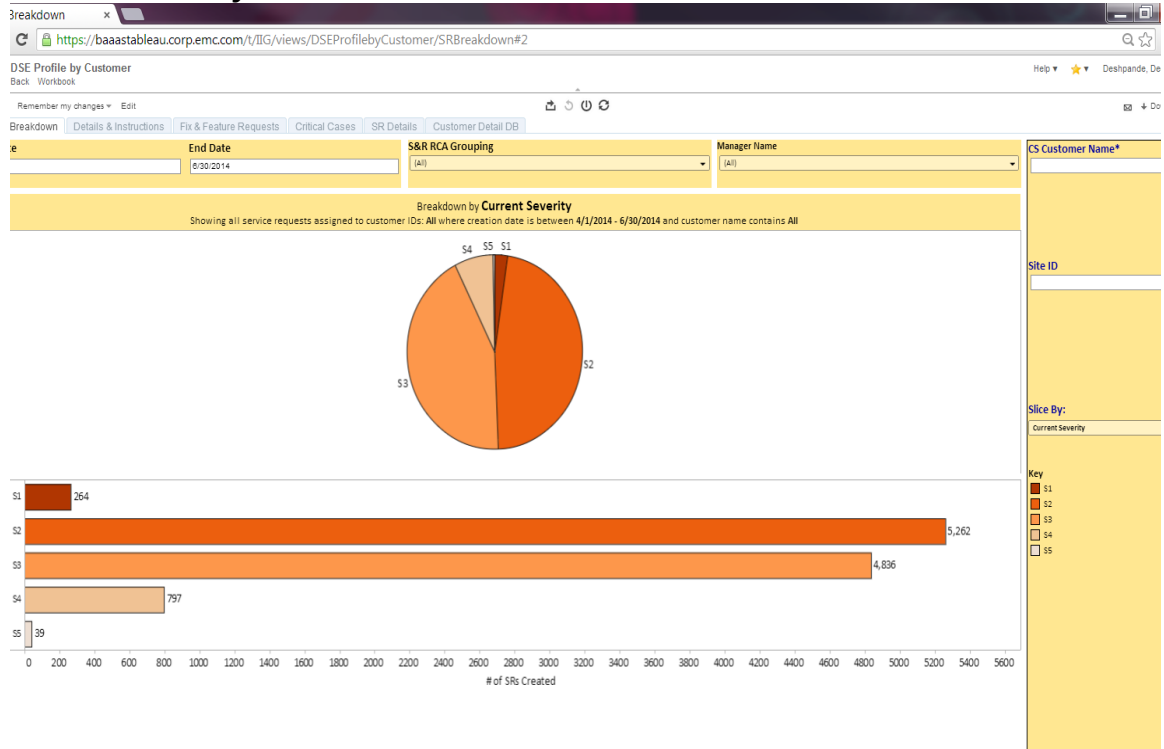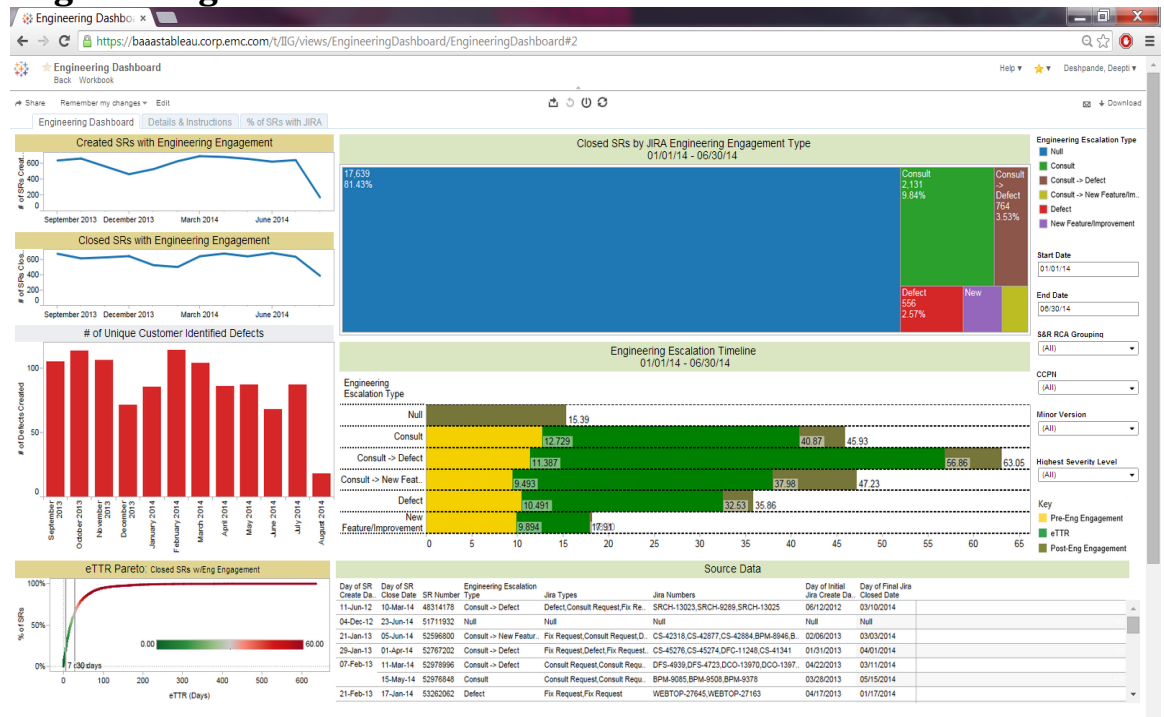Following are few other dashboards, which I developed or enhanced:

Backlog Manager
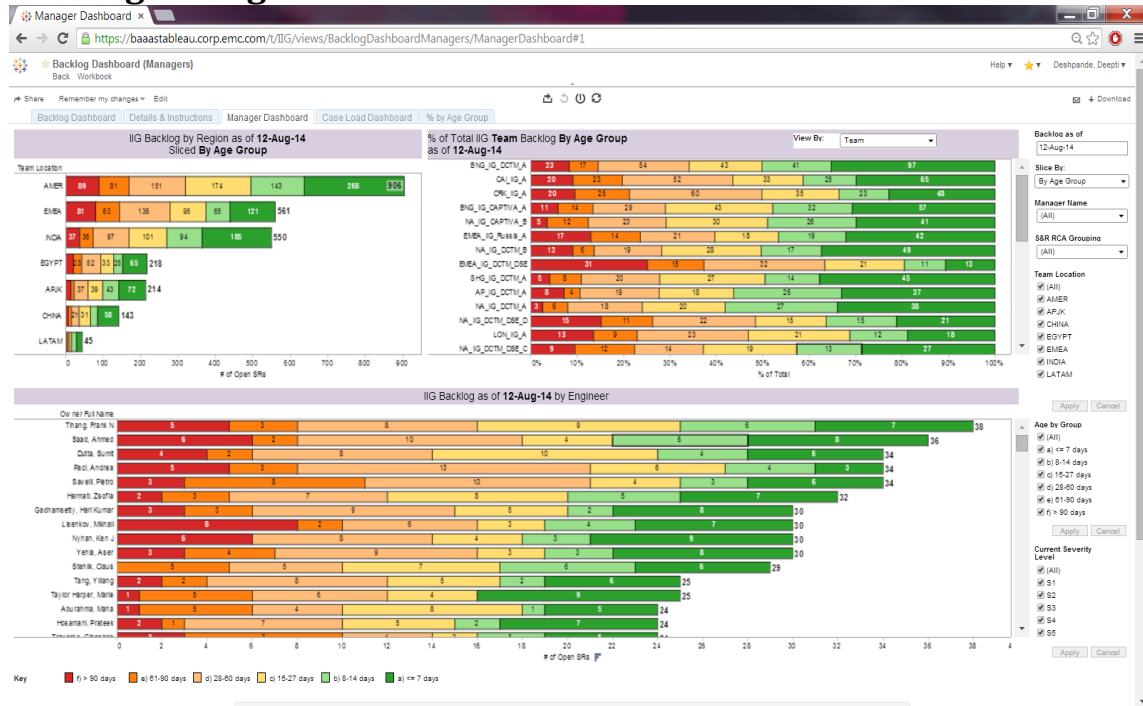
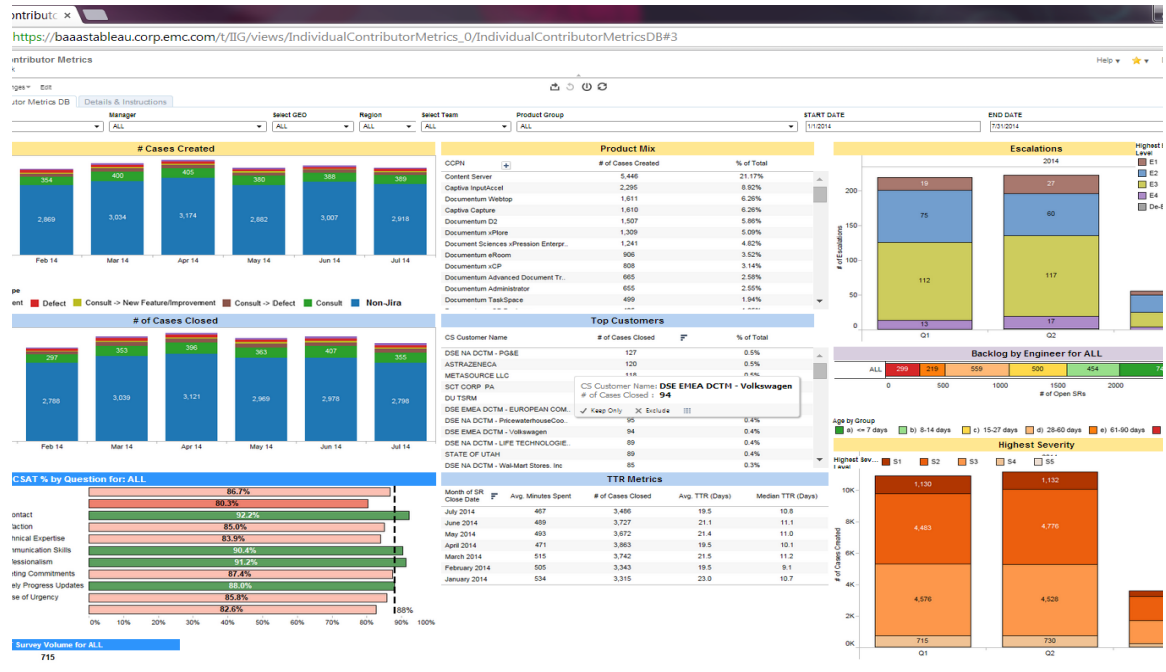
Cases by Customer

DSE Profile by Customer

Engineering Dashboard

Individual Contributor Metrics

Achievements

- ✓ Received letter of recommendation from the manager stating good work at EMC Corporation
- ✓ Received "exceeds expectations" performance appraisal during my stint at EMC Corporation as Summer Intern