Consulting
Resume

Name: **Animesh Jana**

Role: **Manager in Data Analytics**

Educational qualifications

Integrated M.Sc in Mathematics and Computing, IIT Kharagpur

Professional qualifications

- PwC India Pvt. Ltd. (Jun-2018 to Present)
- KPMG India Pvt. Ltd. (Feb-2017 to Jun-2018)
- PwC India Pvt. Ltd. (Jul-2006 to Feb-2017)
- Polaris Software Labs Ltd(Jul-2005 to Jul-2006)
- Patni Computer Systems (Jun-2003 to Jul-2005)

Language(s) known:

- English
- Bengali
- Hindi

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Profile brief :

- Currently working as a Manager in PwC India Pvt. Ltd in the Data Analytics practice.
- 17+ years of Professional Experience in Consulting, Solution and Integration Assignments in BI and Analytics projects.
- Experienced in design and implementation and Management of end-to-end large-scale Enterprise Data-warehouses in Telecom and Banking Sectors.
- Managed large size enterprise integration projects in both Agile and Waterfall mode.
- Experienced in 3NF and Star-Schema(de-normalized) and Hybrid Data-Mart and Data-Warehouse Designs.
- Have implemented Industry standard Banking Data-Model (OFSAA) and Telecom Data Model (OCDM).
- Experienced in Data Quality, Master Data Management, Data Governance
- Experienced as an Enterprise Architect in PMU role in the Government Sector.
- Experienced in handling Geo-Spatial Data Models and Document Databases on Big Data Platform

Key Technology and Product expertise :

RDBMS :	Oracle, Exadata, Teradata, MS SQL server
ETL Tools :	Informatica, OWB, ODI, MS SSIS
OLAP Tools:	SSAS
Communication Data Models:	OCDM
Banking Data Models:	OFSAA
Reporting Tools :	BO XI, Crystal Reports,Tableau
Replication Products :	GoldenGate, Oracle Streams
GIS Technology:	ESRI Map Services, Oracle Spatial
Cloud Platforms:	AWS, Microsoft Azure
Bigdata Products:	Kafka, Spark,Hadoop, HIVE
Statistical Analytics Technologies:	SAS, R

Experience Summary (Telecom Sector)

Analytics Blue-Print for Grameenphone, Bangladesh

The purpose of the project was to prepare a BI road-map for the client. So, that the Telco can retain its position as the top-most telco service provider within Bangladesh.

Initially when the EDW was designed the business focus was on successful product launching. Analysis areas were revenue, gross profitability, gross market-share etc. But, with time, as the market matured, the business users realized that they need to concentrate more towards customer retention to evade away its competitors. So, their focus area shifted towards advanced analytical areas like Customer Churn Prediction, Customer Profiling, Campaign Management etc.

Since, the Telco's customer-base is huge, ad-hoc analysis on customers demands very high computational resources. Also, maintaining separate infrastructure for each analysis area is very costly and involves high maintenance costs along with increasing data-redundancy. So, the client wanted to move the EDW to a "All-in-One" type of architecture. Grameenphone has engaged us to provide a high-level road-map to migrate the overall BI solution to an Engineered System architecture.

EDW Implementation for Grameenphone, Bangladesh

As per the road-map prepared by us , the Telco had taken an initiative to revamp all their existing systems to "All-in-One" type of Architecture.
As part of this initiative they had implemented the solution using the following products:

- Oracle Communication Data-Model (OCDM)
- Oracle Exadata Box (Full Rack) /Oracle Data Integrator (ETL tool) / Exalytics (for BI platform)
- SAS (for advanced analytics)

We had built a semi-real time warehouse on Oracle Communication Data Model (OCDM), with the Presentation Layer being refreshed multiple times a day. Around 700GB of incremental source data was loaded daily to the ware-house. The overall model was hybrid between 3NF and star-schema. The warehouse base-layer was built in 3NF. Whereas the analytical/presentation layers were built in star-schema. We had designed a Master Data Management Model and Data Quality framework, for seamless integration among multiple source systems.

We had configured end-to-end BI solution for the following departments/Business Areas.

- Network and Distribution
- Revenue and Risk Analysis
- Commission Management System
- Mobile number Recycling and Churn Analytics

Experience Summary (Telecom Sector)

EDW Implementation for Grameenphone, Bangladesh

For this project I was the primary Solution Architect and Project Manager on the Datawarehouse and ETL Design Track.

My Management Activities included:
  - Creating Project Plans (using MPP), Scope Documents, Schedules and Forecasts.
  - Provide timely communication on the impact of changes and decisions.
  - Manage on the Agile Methodology (using JIRA)
  - Resolve project issues, mitigate risks, and manage scope change requests.
  - Provide project progress reports to the PwC Management and client stakeholders

Design of Campaign Data-mart and Campaign disbursement tool for Grameenphone, Bangladesh

We developed the Campaign Management System (CMS) Analytical Module on **SAS** platform (SAS Marketing Automation). The data-mart was designed on Oracle Exadata platform. My role in this project was to design the ETL and Data-Model for Campaign Data Mart

Customer Segmentation and Churn Prediction for Grameenphone, Bangladesh

The purpose of the project was to identify different groups within the subscription base depending on the usage pattern and to predict probable customers which are likely to churn. The primary data source for this Analytics project was the BIW (Business Intelligence Warehouse) DataMart. SAS DI was used as the ETL tool to extract data from various sources. The source data was profiled and different Data Quality treatments were applied on the profiled data (e.g. Missing Value Treatment, Outlier Treatment and Data Normalization). After the data preparation step was over around 200+ initial list of variables were prepared which would be used to predict the Customer Churn Behavior. We had used different Variable reduction techniques (e.g. VIF, Chi-Square, PCA) to reduce the initial list of variables down to a manageable 25 KPIs.

Market Share Estimation for Grameenphone, Bangladesh

the Telco has the largest subscription base as compared to other telecom operators. However, it is necessary to monitor the total active subscription base, and check if there is a customer migration from the Telco to others, as a result of aggressive promotions from competitors. There is no direct way to get information about active customer base for other operators, so we need to estimate it. We had designed an analytical module to estimate the weekly customer base of other operators (The population) based on the distinct originating and terminating CDRs in the Telco network (The weekly Sample). The module was designed using Excel Solver.

Experience Summary (Telecom Sector)

Cross Sell Up-Sell Analytics Model Implementation for Grameenphone, Bangladesh

Cross Sell refers to the process of selling new products and services to existing subscribers. Whereas Up-Sell refers to selling of additional volumes of already availed products to existing subscribers.

As part of the Cross-Sell model design an initial list {S} of the subscription base was extracted who are the targeted customers for service (Voice, Data , VAS etc.) and with high profitability. Then various Association Rule based techniques (e.g. Market Basket Analysis) were used to identify commonly used combinations for the above mentioned services. For each such combination, classification based techniques were applied to identify sets of customers that are not using parts of the identified combination but not all. Cross-Sell campaigns would then be designed to sell the remaining services to the identified MSISDNs.

Product Profitability Tool Design for Ooredoo, Qatar

The Telco had engaged us, to review their current telecom product port-folio, and identify/analyze revenue and costs on their existing Product/Tariff hierarchy.

Our responsibility was to design/implement a BI solution, which would enable the client to easily analyze both revenue and costs of the existing product hierarchy against Time and Services (ex. Voice calls, SMS, MMS, etc.).

As a part of this project we had designed an Excel Based Solution named as Product Profitability Tool. This Tool was entirely designed on Sql Server Analysis Services. The back-end is a datamart built on Teradata platform. This datamart is designed on top-of the Teradata provided Communication Data-Model (CLDM). Informatica was used as the ETL tool.

I was the project manger and primary solution architect for the BI implementation.

CustomerMaster Data Enrichment for Dialog, Srilanka

The purpose of this projet was to generate consolidated billing at customer-level. Before the project was initiated, billing was performed at account level. If a customer had availed the following products/services: pre-paid, post-paid, fixed-line, dialog-tv, then separate billing was performed for all these services. As there was no way to relate a customer who possessed multiple accounts/services. To address this, we had partnered with SAS to design a Data Quality Solution for their Customer Data. The product used was SAS Dataflux Studio. Since, this was the first implementation, no QKB for Srilanka was available, we had used QKB from India and enriched it with customer data for Srilanka. A SAS Match Code was generated using the Match Definition and SAS Quality Knowledge Base. Using this match-code we updated the master-data for customers. The accuracy level achieved was at around 96 percent.

Experience Summary (Government Sector)

Enterprise Architecture for Geological Survey of India

GSI has embarked on a journey for full-scale IT enablement covering its core functions as well as e-Governance and ICT infrastructure service functions. The project conceptualization was termed as Online Core Business Integrated System (OCBIS). Through this initiative the Govt. Organization aims at:

a. Properly define and integrate business processes so that stake-holders (both internal & external) can be served better.

b. Can serve as the primary source of Geo-spatial data within the country. This includes integration of last 160 years of data collected into a warehouse and make it available to end-users via GIS(Geographical Information System) map-service.

We were engaged in this project as a PMU (Project Management Unit). Our roles included responsibilities for managing all the deliverable of the Implementation Agency as per client's expectation. I was primarily engaged as an Enterprise Architect and Project Manager. And my role included:

a. High level design validation of the SOA-BPM implementation.

b. Validating requirement documents as prepared by the implementation agency with the client. Validating all the data-models related to different business areas.

c. Understanding the integration process.

d. Master Data and Meta-data Management approach validation.

e. Validating GIS related data-models.

f. Validating Data migration approach

We used the HP ALM tool for tracking the progress of the assignment.

Experience Summary (BFSI Sector)

Global Tax Data Migration for GE/PwC Outsourcing Deal

In 2017 GE entered into a deal with PwC Globally to outsource it's Tax team to PwC. PwC provided IT Consulting services for GE Tax Division. As part of our project, we had to provide a comprehensive solution to migrate and integrate all On-prem Relational Databases for Global GE Tax to AWS RDS. As part of the solution we had to ensured zero-data loss on the new platform. We had to performance-tune all the down-stream applications after the data-migration. Also, we had enabled regular backups on AWS RDS environment. However, this is an ongoing process and more stand-alone databases are still getting migrated to the RDS.

Lead Engagement and Cost Optimization (LECO), Fintech Product Design

Digital leads come either directly to our client's website or through third party channels like google or ad partners. The input is stored either in LMS or CRM systems or in clickstream data of the client's website. We try to understand their persona using their digital behavior from the clickstream data using surrogates like Visit & Content Characterization, Traffic Sources, Demographics etc. and map them to existing customer personas to predict conversion probability. This probability can then be used to mark leads as 'Hot', 'Warm' and 'Cold'. We validate the model and implement lead scoring real time. Then allocation is based on conversion probability and product propensity to Client's call center with the aim to maximize lead conversion. The machine learning module is designed using R.

Data-lake implementation for Reliance Health Insurance, India

PwC was involved with the client to design a data-lake which would ingest data from all the transactional systems. The Data-lake is designed on a document database (MongoDB). This document structure will hold all customer-insurance
information document-wise. And, hence information retrieval customer-wise would be very fast unlike relational databases. Also, a separate Datamart was designed in Sql Server, which would be used for MIS reporting.

Experience Summary (BFSI Sector)

OFSAA implementation for Voya Financial, US

The purpose of this project is to generate a consolidated view of the Organizational KPIs through the standardized Insurance Data-model. We had implemented the OFSAA analytical module for the following areas: Party, Policy, Opportunity, ARE/GL. I had designed the data-mappings from the Source systems to the Staging and Presentation layer.

Information Warehouse (IWH) Design and maintenance for Citibank, NA

The objective of the project was to provide maintenance and support operations to Citibank "Corporate Trade" Real-Time Ware-House and Data Mart modules. The data from the source system TRIMS and TE (Trade-Engine) is loaded to the Staging area through "Shareplex" (real time database replication) and "MQ-Series" (Flat Files to Database through Informatica) respectively. Staging area tables are mapped to Data WareHouse tables through Informatica ETL Modules and Stored Procedures.

Agent Commission Computation, Axis Mutual Fund, India

The purpose of the assignment was to calculate the commission for their agents who sells MF products to their customers. These commission computations are classified as 4 different types. e.g. First Year Trail, Long Term Trail, Clawback and Upfront.
We had designed the Commission data model and ETL on SQL Server using Microsoft Azure Cloud Platform.

Master Data Management Solution for PwC Global Client Databases

PwC maintained separate Master Databases across different Lines of Service regionally. But, with x-LoS engagements, and repeat businesses on different service offerings for the same client, it was decided to integrate all Client databases into a centralized environment. This would ease the engagement and billing processes. However, since there were no standardization, we had to adopt proper Data Governance architecture. Then, we handled all Data Quality issues on the client names and Address fields as well-as client hierarchy. All wrong data, missing data and duplicate data were identified and proper data quality rules were applied on the data for data enrichment.

Experience Summary (BFSI Sector)

EDW Implementation for United Bank of India

The Indian Public Bank was pursuing a strategic objective of building a robust centralized data repository (CDR) which would capture data from their various transactional systems and enable them to generate MIS ,Ad-hoc and regulatory reports.

I was involved in this project was as a Solution Strategist – overseeing the design of the overall ETL framework from the source-system (mainly Finnacle) to the Data-Warehouse (**Exadata 11g platform**). And implement the real-time data streaming using Oracle **Golden Gate Technology**.

GST Impact Assessment for a Public Bank, India

My role in the project was as a Technology Advisor, reviewing all the IT systems and Business Processes, and suggest the necessary changes related to GST on the existing systems.

Database Administrator on Exadata platform for United Bank of India

Apart from Solution Strategist, I was also the primary DBA who was responsible for installing, configuring and handling all database related activities on this project. My activities included:

Goldengate(11g) installation and configuration between Oracle 10g Database to Exadata 3.2

The Core Banking System (CBS) was on Oracle Enterprise Database (HP-UX OS). And the business wanted the data to be replicated in real-time to the Datawarehouse on Exadata platform (Linux OS). As the production CBS is resource hungry, we could not install the GG extract processes on the source. So, instead we had to use an intermediate box (with similar configuration as source), and was used for Archived Redo log-mining and then generate trail files, which was then transferred to Exadata and data was replicated via REPLICAT processes.

Database migration from Exadata 3.2 (Oracle Database 11g) to **Exadata 7.2 (Oracle Database 12c) On-Premises Infrastructure**

Due to increase in volume of data and processing requirements, the Exadata database (Data Center) was migrated from 3.2 to 7.2 quarter-rack on high-performance disks. We worked with SONATA Software Team to install and configure the Exadata Database and Storage software with 12c configuration.
We had used the Transportable Table-space (TTS) methodology for data-migration. After the migration we enabled the Goldengate on 12c, with zero data-loss.

Experience Summary (BFSI Sector)

Database Administrator on Exadata platform for United Bank of India

Other activities included…
Applying Database Patches and upgrades
Managing user security, database objects, Performance Tuning of ETL routines.
Database backups and performing recovery plans when necessary
Oracle ASM, RAC, DC/DR maintenance

DBA for PwC Global Databases

As part of the Internal IT Services Team of PwC, we performed the DBA and Application maintenance activities for multiple Production mission-critical databases around the Globe. I was engaged in this assignment for a period of 5 years.

My primary role was to configure and monitor Oracle Streams. The source system was Central Entity Service (CES) database on Oracle 9i. Where-as the target was the PwC Global Security Database. The data-structures of the down-stream was different from the upstream database. We had configured Oracle Streams with Asynchronous Streaming mechanism. The Change Data Capture (CDC) was configured to perform the data-transformation within the queue. This enabled fully real-time data-transformation and streaming between the mission-critical Oracle databases without the need of a separate ETL tool.

I also, had to perform monthly refresh of Development Instances from Production using Transportable Tablespace (TTS) Methodology.
Additional activities included routine back-ups, database cloning, Database migrations, and also restore/recovery of databases on MS SQL and Oracle Platforms.

BI Implementation on Financial Performance Management for PwC Canada

PwC Canada had an existing Timesheet and Billing system which was migrated to the new platform: iPower. However, all the down-stream applications could not properly migrated by their SI vendor(s). Therefore, the client engaged us to mitigate their problems as well as cater to the new business requirements on Financial Performance Management. Our roles included studying the existing source systems, understanding the mappings on the iPower, perform a Gap-analysis on the existing implementation. Also, on a separate track collect new user requirements on reporting. The entire solution was implemented on Microsoft stack (Integration Services (SSIS), Reporting Services (SSRS), Analytical Services (SSAS). The database was also on SQL Server 2008. Apart from being a team-member for SI, I also performed the regular DBA activities on the SQL Server environment, which included Back-ups, Cloning and Database migrations, Performance Tuning of the environment. Etc.

Experience Summary (Retail Sector)

Reporting Solution for Castrol India

Castrol India had engaged us to implement an operational reporting system (IORS) for its Supply Chain and Finance Processes. These reports would provide them detailed information regarding the operational efficiency of the overall Supply Chain process. A data warehouse was designed to support canned and ad-hoc reports. The solution was designed on MS product Stack. (viz. SQL Server Database, Integration Services, Analysis Services, Reporting Services).

Data-lake and ELT (Executive-Leadership-Team) Dashboard implementation for Pepsico ANZ

Pepsico ANZ wanted to migrate their existing Analytics modules to an integrated all-in-one architecture which would provide better visibility across the organization and improved decision making. The source systems were the SAP ECC,SAP APO and SAP CRM systems. Also, data is made available from third-party vendors like IRi and Nielsen. The data is first ingested into Azure Cloud Storage. Then data is transformed using Data Factory and loaded into multiple business-specific data-marts on Teradata platform. The presentation layer is on Tableau on which the E-L-T dashboards are designed.