



Mahendra
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Professional Summary:

Solution Driven Data management professional with experience leading the end-to-end delivery of data driven architecture, data modeling, data governance, design, development and implementation of data warehousing solutions for clients including a New York City Government Agency.

- Expertise developing and supporting a **data model** and **architecture** that supports and enables the overall strategy of expanded data deliverables, services, process optimization and advanced business intelligence.
- Experienced in **big data analysis** and developing data models using Hive, PIG, and Map reduce, SQL with strong data architecting skills designing data-centric solutions.
- Experienced in integration of various relational and non-relational sources including DB2, Teradata, **Oracle**, Netezza, **SQL Server**, NoSQL, COBOL, XML and Flat Files, to Netezza database.
- Skilled in **Data Profiling, Data Modeling, ETL Architecture** and **Oracle DBA duties**.
- Proficient in Data Analysis using **SQL** on **Oracle**, MS SQL Server, DB2 and Teradata
- Proven ability to develop a **BI/DW** solution (ETL, OLAP, Data mart) using Informatica, BI Reporting tool including Tableau and QlikView.
- Experience **leading teams** of ETL and BI developers and Testing team.
- **Logical** and **physical database design** expertise including Tables, Constraints, Index using **Erwin, ER Studio, TOAD Modeler** and **SQL Modeler**.
- Skilled in Data Modeling and Data Analysis experience using **Dimensional Data Modeling** and Relational Data Modeling, **Star Schema/Snowflake Modeling**, FACT and Dimensions tables, **Physical** and Logical **Data Modeling**.
- Proficient in data development using **T-SQL, DTS, OLAP, PL/SQL, Stored Procedures, Triggers, Functions, Packages, performance tuning** and optimization for business logic implementation.

Data Modeling Tools	Erwin R6/R9, Rational System Architect, IBM Infosphere Data Architect, ER Studio, Oracle Designer
Tools	AWS, OBIEE 10g/11g/12c , SAP_ECC6 EHP5, Go to meeting, Docusign, Insidesales.com, Share point, Mat- lab.
ETL/Data warehouse	Informatica 9.6/9.1/8.6.1/8.1, SAP Business Objects XIR3.1/XIR2, Web Intelligence, Talend, Tableau 8.2, Pentaho
Big Data	Pig, Hive, Spark, Scala, HBase, Sqoop
Databases & Tools	SQL Server 12.0/14.0 , Teradata 15.0, Oracle 9i/10g/11g/12c , MS Access, NoSQL, Mongo, DB2
BI Tools	Tableau 7.0/8.2, Tableau Server 8.2, Tableau Reader 8.1, SAP Business Objects, Crystal Reports, SSRS, SSIS
Packages	Microsoft Office/Project/Visio 2010, SAP, SharePoint Portal Server
Version Tool	GIT, SVN
Project Execution Methodologies	Agile, Ralph Kimball, BillInmon data warehousing methodology, Rational Unified Process (RUP), Rapid Application Development (RAD), Joint

	Application Development (JAD)
Quality Assurance Tools	WinRunner, LoadRunner, Test Director, QuickTest Pro (QTP), Quality Center, Rational Functional Tester.
Operating Systems	Windows, UNIX, Sun Solaris

Education:

- BS in Computer Science, Anna University, Chennai, India

Professional Experience:

Client: NYC Mayor's Office of Contract Services (MOCS) through UNIVERSAL Technologies, New York, NY	Dec 2018 – Present
Title: Data Modeling Specialist	

Responsibilities:

- Documented a complete and thorough analysis of the **data model requirements** of the program across all work streams.
- Performed analysis of the "**as-is**" and "**to-be**" needs of the program.
- Conducted fit/gap analysis of a selected **COTS solution**, including the out-of-the-box, configurable, conditional and customized data capabilities.
- Handled daily tasks regarding AWS.
- Researched the industry and provided quantitative and qualitative assessments of issues and potential initiatives, including an evaluation of best practices.
- Created **physical, logical** and conceptual **data models** using **Erwin**.
- Elicited requirements by interviewing business owners/stakeholders to **understand business needs, processes, and data sources, conducting interface analysis**, reviewing documentation and utilizing other techniques set forth in the BABOK.
- Translated business needs into clearly defined and documented **detailed requirements**.
- **Spearhead the prioritization, solution assessment** and validation of requirements with the business and technical project teams.
- Developed **analysis documentation**, including **fit/gap analysis** of requirements to vendor out-of-the-box/ configurable functionality, data dictionaries, and use cases.
- **Aligned requirements with enterprise standards** to maximize the value of off-the-shelf components.
- Assisted stakeholders in navigating "as-is" vs. "to-be" decisions.
- Validated Vendor/SI design and implementation of relevant functional areas.
- Supported Quality Assurance/Testing team to obtain user acceptance sign-off in relevant functional areas.
- Supported Quality Assurance/Testing team to obtain user acceptance sign-off in relevant functional areas.

Client: Santander Bank, Dorchester, MA	Apr 2017 – Present
Title: Sr. Data Architect/Data Modeler	

Responsibilities:

- Responsible for **Data Profiling, Data Modeling, ETL Architecture** and **Oracle DBA duties**.
- Responsible for Big data initiatives and engagement including **analysis, brainstorming, POC, and architecture**.
- Supported **agency data management programs** and data governance activities to align with the **enterprise architecture** and incorporated data strategy and data governance principles into program, project, and IT portfolio management processes.
- **Researched, evaluated, architected**, and deployed new tools, frameworks and patterns to build sustainable **Big Data platforms** for the clients.
- Worked with Hadoop eco system covering HDFS, HBase, Yarn and MapReduce.

- Responsible for **Data Architecture** and in **developed** the overall **ETL architecture**, including solution architecture as needed.
- **Designed the Logical Data Model** using **ERWIN 9.64** with the entities and attributes for each subject area.
- Developed **long term data warehouse roadmap** and **architectures**, designs and builds the data warehouse framework per the roadmap.
- Designed and developed a Data Lake using Hadoop for processing raw and processed claims via Hive and Informatica.
- Involved in designing and architecting data warehouses and data lakes on high performance (Teradata) and big data (Hadoop - Hive and HBase) databases.
- Generated big data Hadoop modeling for Hive database tables.
- Created **Conceptual, logical and physical data models**.
- Responsible for Big data initiatives and engagement including analysis, brainstorming, POC, and architecture.
- Performed Cloud computing using **Microsoft Azure** with various BI Technologies.
- Involved in creating Hive tables and loading and analyzing data using hive queries
Developed Hive queries to process the data and generate the data cubes for visualizing
Implemented.
- Developed **Data Mapping, Data Governance**, Transformation and cleansing rules for the Master Data Management Architecture involving OLTP, ODS.
- Implemented Join optimizations in Pig using Skewed and Merge joins for large datasets schema.
- Designed and developed a Data Lake using Hadoop for processing raw and processed claims via Hive and Informatica
- Developed and implemented different Pig UDFs to write ad-hoc and scheduled reports as required by the Business team.
- Designed **Big Data platform technology architecture** including data intake, data staging, data warehousing, and high-performance analytics environment.
- Used Polybase for ETL/ELT process with **Azure Data Warehouse** to keep data in Blob Storage with almost no limitation on data volume.
- Created the template **SSIS package** that will replicate about 200 processes to load the data using Azure SQL
- Involved in loading data from **LINUX file system** to HDFS Importing and exporting data into HDFS and Hive using Sqoop Implemented Partitioning, Dynamic Partitions, Buckets in Hive.
- Designed and **developed architecture** for data services ecosystem spanning Relational, NoSQL, and Big Data technologies.
- Specifies **overall Data Architecture** for all areas and domains of the enterprise, including Data Acquisition, ODS, MDM, Data Warehouse, Data Provisioning, ETL, and BI.
- Exploring NoSQL options for current back using Azure Cosmos DB (SQL API)
- Developed **Data Mapping, Data Governance**, and Transformation and cleansing rules for the Master Data Management Architecture involving **OLTP**, ODS.
- Involved in **Normalization / De normalization techniques** for **optimum performance** in relational and dimensional database environments.
- **Performance tuning** and stress-testing of NoSQL database environments in order to ensure acceptable database performance in production mode.
- Implemented strong referential integrity and auditing using triggers and SQL Scripts.
- Created and **managed database objects** (tables, views, indexes, etc.) per application specifications.
- Implemented **database procedures, triggers** and **SQL scripts** for development teams.
- Designed and developed **T-SQL stored procedures** to extract, aggregate, transform, and insert data.
- Created and maintained **SQL Server** scheduled jobs, executing stored procedures for the purpose of extracting data from DB2 into **SQL Server**.
- Utilized SQL Server Reporting Services (**SSRS**) to author, manage, and deliver both paper-based and interactive Web-based reports.
- Performed Hive programming for applications that were migrated to big data using Hadoop

- Generated parameterized queries for generating tabular reports using global variables, expressions, functions, and stored procedures using **SSIS**.
- Created External and Managed tables in Hive and used them appropriately for different PIG scripts required for reporting.
- Developed, and scheduled variety of reports like cross-tab, parameterized, drill through and sub reports with **SSRS**.
- Generated comprehensive **analytical reports** by running **SQL queries** against current databases to conduct data analysis pertaining to various loan products.
- Focused on **architecting NoSQL databases** like Mongo, Cassandra and Cache database.
- Perform routine management operations, including configuration and performance.
- Created MongoDB data set backups using system-level file snapshot tool, such as LVM or native storage appliance tools.
- Performed Point in time Backup and recovery in **MongoDB** using MMS.
- Responsible for Data modeling for data from RDBMS to and MongoDB for optimal reads and writes.
- Designed and **developed architecture** for **data services ecosystem** spanning Relational, NoSQL, and Big Data technologies.
- Designed **Logical** and **Physical data models** for different database applications using **Erwin**.
- Performed **Data modeling, Design, implementation**, and deployment of high-performance, custom applications at scale on Hadoop /Spark.
- Reverse engineered some of the databases using Erwin.
- Utilized SQL across dialects (writing MySQL, PostgreSQL, Redshift, SQL Server, and Oracle).
- Coordinated with Client and Business Analyst to understand and develop OBIEE reports.

Environment:

DB2, CA Erwin 9.6, Oracle 12c, MS-Office, **SQL Architect**, TOAD Benchmark Factory, SQL Loader, PL/SQL, SharePoint, Erwin 9.64, Talend, MS-Office, Redshift, **SQL Server 2008/2012**, Hive, Pig, Hadoop, Spark, Azure

Client: Molina Healthcare, Long Beach, CA	Oct 2015 – Mar 2017
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Title: Sr. Data Architect/Data Modeler

Responsibilities:

- Participated in all phases of the SDLC using technologies including **Oracle, Erwin, DataStage, Data Warehousing** and Cognos.
- Responsible for **developing** and supporting a **data model** and **architecture** that supports and enables the **overall strategy** of expanded data deliverables, services, process optimization and advanced business intelligence.
- Worked with Data Vault Methodology **developed normalized Logical** and **Physical database models**
- Collaborated with Architecture team to get the metadata approved for the new data elements that are added for this project.
- Performed **data modelling** using **Erwin r9.6**.
- Created **Staging** and **Target Models** for the Enterprise **Data Warehouse**.
- Designed **Star** and **Snowflake Data Models** for **Enterprise Data Warehouse** using **ERWIN**.
- Partnered with Data Steward Team for designing, documenting and configuring Informatica Data Director for supporting management of MDM data.
- Worked on a POC to compare processing time of Impala with Apache Hive for batch applications to implement the former in project.
- Responsible for technical Data governance, **enterprise wide Data Modeling** and **Database design**.
- Creation of BTEQ, Fast export, Multi Load, TPump, Fast load scripts for extracting data from various production systems.
- Wrote JIL scripts to manage the scheduled loading of sample date into the various Databases and respective objects, through a combination of shell and SQL scripts.

- Generated Sybase SQL scripts that include creating tables, Primary Keys, and Foreign Keys.
- Created **complex stored procedures, Functions, Triggers Indexes, Tables, Views and SQL joins for applications.**
- **Troubleshoot performance issues** and fine-tuning queries and stored procedures.
- Generated reports to retrieve data using database code objects, such as Stored Procedures, views, functions and multiple **T-SQL.**
- Configured Collibra Data Governance Center DGC based on client requirements and specifications.
- Developed reports such as Drill down, Drill through, Sub Reports, Charts, Matrix reports, Parameterized reports and Linked reports using **SSRS.**
- Created Hive tables to process Advisor performance data in HDFS and exported it to downstream databases for various type of analyses using Sqoop.
- Developed application **interface workflows** using Groovy scripting in conjunction with the out of the box Collibra REST API's.
- Developed Hive scripts (using partitions, joins, buckets) to process the data for analysis (like quarterly growths of products, area wise sales, predict prices for new products based on market needs etc).
- Used Data Services to move data in to Hive and Hadoop Clusters.
- Developed Hive and Map-reduce tools to design and manage HDFS data blocks and data distribution methods.
- Implemented **Data Vault Modeling Concept** as a solution for dealing with change in the environment by separating the business keys and the associations between those business keys, from the descriptive attributes of those keys using HUB, LINKS tables and Satellites.
- Utilized AWS Redshift and RDS for implementing models and data on RDS and Redshift.
- Designed **ER diagrams (Physical and Logical using Erwin)** and mapping the data into database objects and identified the Facts and Dimensions from the business requirements and developed the **logical** and physical models using **Erwin.**
- Developed mapping spreadsheets for (ETL) team with source to target data mapping with physical naming standards, data types, volumetric, domain definitions, and corporate meta-data definitions.

Environment:

AWS Redshift, RDS, Big Data, JDBC, Cassandra, NOSQL, Hive, Pig, Spark, Scala, Python, Hadoop, MySQL, **PostgreSQL, SQL Server, Oracle, Erwin r9.6**, Informatica, SSRS, SSIS, REST API, Datastage, Groovy Scripting,

<p>Client: General Motors, Milford, MI Title: Sr. Data Analyst/Data Modeler</p>	<p>Jul 2013 – Sep 2015</p>
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Responsibilities:

- Performed **Data Analysis, Data Migration** and **data profiling** using **complex SQL** on various sources systems including Oracle and Teradata.
- Used forward engineering to generate DDL from the Physical Data Model and handed it to the DBA.
- Generated **comprehensive analytical reports** by running **SQL queries** against current databases to **conduct Data Analysis.**
- Created DDL scripts for implementing **Data Modeling changes.**
- Created **ERWIN reports** in HTML, RTF format depending upon the requirement, Published Data model in model mart, created naming convention files, co-coordinated with DBAs' to apply the data model changes.
- Performed **logical data model design** including **normalization/de-normalization** referential integrity, data domains; primary and foreign key assignments and data element definitions as applied to both relational and dimensional modeling.
- Generated a separate MRM document with each assignment and shared it on SharePoint along with the PDF of updated **data models.**
- Created a list of domains in **Erwin** and worked on building up the data dictionary for the company.

- Worked on Unit Testing for three reports and created SQL Test Scripts for each report as required.
- Modified cube and dimensions, deployed KPIs on **SSRS** and created different metrics, added new measure groups and dimensions.
- Development of reports using different **SSIS Functionalities** like sort prompts and cascading parameters, Multi Value Parameters.
- Created **dynamic SSRS reports** with the help of parameters which changes according to the user input.
- Created dashboard **SSRS reports** under report server projects and publishing SSRS reports to the reports server.
- Use **SAS, SQL, XML, PL/SQL** and **Windows batch programming techniques** to code the technical specifications apply business logic and produce automated reporting solutions.
- Involved in Data Architecture, Data profiling, Data analysis, data mapping and Data architecture artifacts design.
- Modified SSIS packages for manipulating the data Source coming from As400 to Back Office system.
- Altered the stored procedures and joins to efficient usage of mappings.
- Developed **Complex Stored Procedures, Views and Temporary Tables** as per the requirement.
- Created and developed the **stored procedures, triggers** to handle complex business rules, history data and audit analysis.
- **Evaluated technical decisions and deliverables** for compliance and quality analysis.
- Designed, developed and deployed Apex Classes, Controller Classes and Apex Triggers, SOQL, Packages, Visual force Packages for various functional needs of the application.
- Creation of custom Visual force pages, apex triggers and apex classes, REST API Web services.
- Developed several Apex Triggers, Classes and Apex API.
- Wrote SOQL and SOSL statements within custom controllers, extensions and triggers.
- Created **process models** and enhance existing business process models using Bizagi Modeler.
- Documented the transformation rules for data migration from **OLTP to Warehouse environment** for reporting purposes.
- Imported and cleansed data from various sources like Teradata, **Oracle**, flat files, **SQL Server** with high volume data.
- Integrated Spotfire visualization into client's Salesforce environment.
- Created data masking mappings to mask the sensitive data between production and test environment.
- Responsible for all metadata relating to the EDW's **overall data architecture**, descriptions of data objects, access methods and security requirements.
- Perform logical and physical **OLAP / OLTP schema design**.
- **Designed STAR schema** for the **detailed data marts** and **plan data marts** consisting of confirmed dimensions.
- **Used Erwin model mart** for effective model management of sharing, dividing and reusing model information and design for productivity improvement.
- Used Model Manager Option in **Erwin** to synchronize the data models in Model Mart approach.
- Produced powerful dashboards telling story behind the data in an easy to understand format such as pie, bar, geo, and line charts that are viewed daily by senior Management.
- **Defined data management policies** including enterprise naming and definition standards, specification of business rules, data quality analysis, standardized calculations and summarization definitions, and retention criteria.

Environment:

Windows, Erwin, OLAP, OLTP, Teradata, SQL Server, SSRS, Informatica Power Center 6.1/7.1, QTP 9.2, Test Director 7.x, LoadRunner 7.0, Oracle11g, UNIX AIX 5.2, PERL, Shell Scripting, SOQL, REST API Web Services, Apex API, SAS, SQL, XML, PL/SQL, Salesforce, Visual Force, SharePoint

Client: Aetna Healthcare
Title: Sr. Data Analyst/Data Modeler

Dec 2011 – Jun 2013

Responsibilities:

- Analyzed the physical data model to understand the relationship between existing tables.
- Cleansed the unwanted tables and columns as per the requirements as part of the duty being a Data Analyst.
- **Developed data Mart** for the base data in **Star Schema, Snow-Flake Schema** involved in developing the data warehouse for the database.
- Worked on different data formats such as Flat files, SQL files, Databases, XML schema, CSV files.
- Performed Unit Testing for three reports and created **SQL Test Scripts** for each report as required
- Utilized **ER Studio** as the main **data modeling tool** along with Visio
- Established and maintained **comprehensive data model documentation** including detailed descriptions of business entities, attributes, and data relationships.
- **Designed Star and Snowflake Data Models** for **Enterprise Data Warehouse** using **ER Studio**.
- Worked on Metadata Repository (MRM) for maintaining the definitions and mapping rules up to mark
- Trained Spotfire tool and gave guidance in creating Spotfire Visualizations to couple of colleagues
- Developed Contracting Business Process Model Workflows (current / future state) using Bizagi Process Modeler software.
- Created a **Data Mapping document** after each assignment and wrote the transformation rules for each field as applicable
- Performed Unit Testing for three reports and **created SQL Test Scripts** for each report as required
- Configured and developed the triggers, workflows, validation rules and the deployment process from one sandbox to other.
- Managed **Logical and Physical Data Models** in **ER Studio** Repository based on the different subject area requests for integrated model.
- Created automatic field updates via workflows and triggers to satisfy internal compliance requirement of stamping certain data on a call during submission.
- Established and maintained **comprehensive data model documentation** including detailed descriptions of business entities, attributes, and data relationships.
- Worked on Metadata Repository (MRM) for maintaining the definitions and mapping rules up to mark.
- Developed **data Mart** for the base data in **Star Schema, Snow-Flake Schema** involved in developing the data warehouse for the database.
- Developed enhancements to Mongo DB architecture to improve performance and scalability.
- Forward Engineering the Data models, Reverse Engineering on the existing Data Models and Updates the Data models.
- Performed data cleaning and data manipulation activities using NZSQL utility.
- Analyzed and understood the architectural design of the project in a step by step process along with the data flow
- Created DDL scripts for implementing Data Modeling changes.
- Created **ERWIN reports** in HTML, RTF format depending upon the requirement, Published Data model in model mart, and created naming convention files.

Environment:

Oracle SQL Developer, Oracle Data Modeler, Teradata14, SSIS, Business Objects, SQL Server 2008, **ER/Studio Windows**, MS Excel

Client: Bharathi Telecom, India
Title: Data Analyst

May 2009 – Nov 2011

Responsibilities:

- Worked with Business users during requirements gathering and prepared **Conceptual, Logical and Physical Data Models**.
- **Wrote PL/SQL statement, stored procedures and Triggers in DB2** for extracting as well as writing data.
- Optimized the existing procedures and **SQL statements** for the better performance using **EXPLAIN PLAN, HINTS, SQL TRACE** to tune **SQL queries**.
- Developed interfaces to connect to multiple databases like SQL Server and Oracle.
- Assisted Kronos project team in SQL Server Reporting Services installation.
- **Developed SQL Server database** to replace existing Access databases.
- Attended and participated in information and requirements gathering sessions
- **Translated business requirements** into working **logical and physical data models** for **Data warehouse, Data marts and OLAP applications**.
- Designed and created web applications to receive query string input from customers and facilitate entering the data into SQL Server databases.
- Performed thorough **data analysis** for the purpose of overhauling the database using SQL Server.
- Designed and implemented **business intelligence** to support sales and operations functions to increase customer satisfaction.
- Converted **physical database models** from **logical models**, to build/generate DDL scripts.
- Maintained **warehouse metadata**, naming standards and warehouse standards for future application development.
- Utilized ETL to load data from **DB2, Oracle databases**.
- Performed data profiling for multiple sources and answered complex business questions by providing data to business users.
- Worked with data investigation, discovery and mapping tools to scan every single data record from many sources.
- Created **Physical, logical and conceptual data models**.
- Designed both **3NF data models** for ODS, OLTP systems and **dimensional data models** using star and **snowflake Schemas**
- Wrote and executed unit, system, integration and UAT scripts in a **data warehouse projects**.
- Extensively used **ETL methodology** for supporting data extraction, transformations and loading processing, in a complex EDW using Informatica.
- Worked and experienced on Star Schema, DB2 and IMS DB.

Environment:

Oracle, PL/SQL, DB2, ERWIN, UNIX, Teradata SQL Assistant, Informatica, OLTP, OLAP, Data Marts, DQ Analyzer, SQL Server