

# Sean Shi

## **Sr. Data Architect / BI Architect**

Sugar Land, TX

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- Email me on Indeed: <http://www.indeed.com/r/Sean-Shi/f833d7bc7844f81e>

- 12+ years as data architect. Designed multiple complex enterprise level applications. Deep knowledge about the application data design, development and implementation.
- 12+ years of experience to study and analyze varieties of business (Financial, B2P, Energy etc.), dealing with different level of users and their requirement. Document the business data requirements, design and implement the enterprise level data flows, data standards, data governance throughout every application phases.
- 8+ years of experience in project management on different type of projects including large infrastructure migration project, data migration project, system integration projects as well as new business functionality projects. Maintained the project plan end to end, managed more than 40 team members at the same time including Business Analyst, Application Architects, Front and Back End developers, QA staff, DBAs, SAs etc.
- 16+ years of experience of database development from designing, coding, implementing, performance tuning. Have both strong Oracle DBA knowledge and excellent PL/SQL programming skills.
- 16+ years of experience and expert of database tuning including SQL tuning, PL/SQL tuning, database object tuning. Very familiar with all tuning methods such as partitions, indexes, compressions, execution plans etc. Have achieved numerous successful cases that saved huge budget for the company.
- 8+ year experience with ETL processing using all different kinds of methods including PL/SQL - UNIX Scripting, Informatica, Syncsort, SQL Loader.
- 16+ years of experience in full software life-cycle start from business requirement to functional spec, database design and implementation, Development, QAIT, UAT, Release and Production / DR Supports.
- 4 years of experience in total about the BI presentation tools such as Qlikview, Tableau, Business Objects, BW. Understand the data requirements for each tool.
- 1 year of experience in Big Data Hadoop Environment: R/R Studio, HBase, Phoenix, Spotfire

Authorized to work in the US for any employer

## Work Experience

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### **DW/ODS Team Lead / Manager**

Halliburton - Houston, TX

May 2013 to Present

Managing 4 onshore team member and 4 offshore team member DW/ODS team. Worked as leading data architect to develop and maintain a 9 TB DW/ODS Oracle database with over 250 batches per day. The DW/ODS database is Halliburton Enterprise data store sourcing the data directly from SAP environment, all PSL related applications and third party sources. It process the data by combine all the information together and provide the data to all the BI interfaces such as BO, BW and Qlikview as well as other applications such as Hyperion and Taxwires.

- Worked on Big Data project to support the ETL process loading the data from SAP, data warehouse environment into Google Cloud Big Data environment by using Oozie, HBase, Pig, Scala, Spark, and Phoenix. Support the data scientist team by managing their Spotfire libraries and instances.
- Designed and developed the revolutionary Asset Management BI Dashboard (QlikView) to help thousands of business users and managers globally to analyze their asset, their maintenance activities and associated costs. This dashboard is helping the company saving millions of dollars yearly by helping them to easily find out all the area of improvements, by providing them what-if analysis and also by providing them real-time KPI matrixes.
- Designed and created new ODS/DW frameworks to standardize the DW best practice and coding techniques. The new framework is implemented using Oracle PL/SQL which is helping the company get away from all commercial expensive ETL software. It provides better architecture framework, work flow control, metadata management and documents than most of other ETL software and most of all it reduces the DW coding effort tremendously.

### **Vice President / Data Architect**

JP Morgan Chase - Houston, TX

April 2009 to May 2013

Worked as Enterprise Data Architect to integrate all JP Morgan Chase collateral management system together including OTC (Over the counter Derivative), FO (Future and Options) and PB (Prime Broker) which are managing more than 2 thousand billions worth of collateral for all JPMC clients. Analyzed all of the legacy applications that currently running on different platform such as Unix, Linux, AS/400 and Windows and using different database such as Oracle, Sybase, DB2 and SQL Server. Managed enterprise level local data model by gathering the requirement from different level of users and business analysts; defined the data standard and data governance model; designed all the data flow between different systems across different platforms and databases; managing enterprise level metadata store including data dictionary, data flow and data mapping; designed the physical data model including demoralizing, indexing, partitioning.

- Worked as application architect and project manager to manage COAST backend processes re-architecture project. This project involves 15+ onshore and offshore developers and used more than 18 months to complete. COAST is one of the most important applications in JP Morgan Chase Investment Bank that handles all derivative trades' margin calculation, collateral management and margin calls. It is processing over 8 million trades and move billions of dollars in daily basis. This project is to migrate all of the backend processes that running as Unix Script, SQL into a more advanced JAVA application. As the application architect, I have designed multiple frameworks to load the data from different upstream systems; manage all of the backend jobs including their scheduling, dependencies and troubleshooting; monitor the application and automatically alerts different parties; check the system health and detect the system issues proactively.

### **Data Architect**

Telecheck International, Inc - Houston, TX

January 2001 to April 2009

Designed the new Check Authorization System Oracle relational databases, which supports a true OLTP system that process more than 3 million checks a day 24X7, by working as Business Analyst, Data Architect and development DBA. This including 3 database design involving over 200 tables and over 70 materialized views contains over 7 terabytes data as of 2009 and keep the growth rate of over 15G / day.

- Leading an offshore team to migrated over 1T data from legacy VMS system to new Oracle database in real time (migrate the data and synchronize the data without impact Check Authorization System) using Informatica, Syncsort, Oracle SQL Loader, PL/SQL programming and Unix Scripts.
- Invented Corporate Patent Pending algorithm and database structure to accumulate the customer information in real time. This key algorithm make the system process the data more than 200 times faster so that the database can handle more than 200 checks per second in peak hours.
- Invented Corporate Patent Pending algorithm and data structure to support the data versioning. This algorithm helped our user to keep full track of the data history. It became the standard algorithm to track all of the data changes in Telecheck. This algorithm also helps our data warehouse to keep track the most accurate data in our system.
- Oversee all of the applications across the Company including Authorization System, Check Settlement System, Merchant Setup System, Correction System, Data Warehousing etc to define the data flow and data moving method to ensure the data will be available to all of the system and business users not only on time but also accurate. Coordinate the efforts, including design the data structures, define the process flows and data access methods, to share the Telecheck Internal information (mainly customer information) with other companies and to gather/migrate other companies' data into Telecheck System.
- Support the data related issues for all of the large applications in Telecheck Systems that are using Oracle database. These supports are including performance tuning for real time application, data movement, reports, web interfaces etc by applying new or improving existing PL/SQL code, SQL queries, Unix Shell Scripts, Informatica, Syncsort etc.
- Keep working with business end users to gather new requirements and design or modify the existing database structures to support new business functionalities.
- Create small PC based applications to support data analyst daily tasks including the application to extract database changes Sybase Power Designer, the application to extract the data mapping from Informatica to MS Excel, the application interact with PVCS to verify data changes, the Excel Macro based application to track all of the data dependencies and data flow between all of the supporting systems. Large number of SQL scripts to do all of the database common tasks etc.
- Worked on different project in FDC companies as data architect consultant to help FDC do the data migrations either from old to new system or from old to new locations.

## Education

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### **Master in Computer Science**

University of Houston - Houston, TX

December 2000

### **Bachelor of Computer Science in Computer Science**

Beijing Union Univ. Beijing

June 1995

## Skills

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SQL, PL/SQL, DW, ETL, Linux, Data Analysis, SpotFire, R/R Studio, Big Data, MS Power BI, QlickView

## Certifications/Licenses

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## OCP

### Additional Information

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- ORACLE Database Administrator / Developer / Designer 12+ years
  - Logical and physical database design.
  - Database Backup and Restore including 24X7 system.
  - Database Performance Tuning and troubleshooting.
  - Oracle Network and Security Administrator.
  - Oracle Stored Procedures, Triggers and Packages.
  - Oracle Enterprise Manager including RMAN.
  - Oracle Experts, Top Sessions and Other Tuning Tools.
  - TOAD, SQLab, SQL Navigator (Quest Software)
  - Visio, Rational, ER WIN, Sybase Power Designer, Oracle Designer
- ETL 12+ years
- Informatica Administration, developments and implementation.
- Syncsort development and implementation.
- Oracle Data Warehouse Builder development.
- Data Warehouse, Data Center supports.
- Other Databases
  - SQL Server 2 Year
  - Microsoft Access 8 Year
  - MySQL 4 Years
  - Sybase/DB2 2 Years
- Programming Languages
  - C, C++ <Include> 10+ Years
  - Unix Shell Scripts 10+ Years
  - Visual Basic <Microsoft Visual Basic> 10+ Years
  - JAVA, HTML and JAVA Scripts 5+ Years
  - PHP/Flash 2 Year</Microsoft></Include>