

PROFESSIONAL SUMMARY

A highly accomplished Data Engineer with over 15 years of experience designing and optimizing complex data solutions for federal agencies. Proven expertise in architecting end-to-end data pipelines on AWS and a deep background in Oracle database administration. Actively advancing expertise in modern cloud architecture through preparation for the AWS Certified Machine Learning Engineer -Associate—and Databricks Certified Data Engineer Professional certifications. Combines deep expertise in **data modeling for complex data lake architectures** and database administration with hands-on skills in modern data engineering technologies, including **Python, SQL**, and cloud platforms like **Azure** and **AWS**. Actively trained in **Databricks, Spark, and Delta Lake**, with a proven ability to design, build, and validate complex data pipelines for large-scale government projects. Experienced in installing, configuring, modeling, designing, and administering enterprise databases in Oracle, PostgreSQL for federal clients including IRS, FDA, DHS, and NASA.

TECHNICAL PROFICIENCIES

- **Data Engineering & Cloud:** Databricks, Apache Spark, Delta Lake, AWS (EC2, Glue ETL, Lambda, Step Functions), Microsoft Azure , Big Data, Hadoop, HDFS, HBase
- **Data Modeling & Architecture:** IBM InfoSphere Data Architect, Erwin, Data Lake & Warehouse Architecture, Logical/Physical Modeling of Oracle, Forward/Reverse Engineering, Visio
- **Databases:** Oracle (9i-12C RAC), Greenplum/PostgreSQL, SQL Server, MySQL, NoSQL (DynamoDB, Cassandra)
- **Programming & Scripting:** **Python, SQL**, PL/SQL, Shell Scripting (UNIX/Linux), Java, C++, XML, XQuery, JSON
- **ETL & BI Tools:** Informatica PowerCenter, DataStage, Oracle Data Integrator (ODI), Business Objects (BO), Tableau, Splunk
- **Project Management & SDLC:** Agile/Scrum, JIRA, ICD/DSR, SDD, Data Dictionary Documentation, PMP, System Design & Testing
- **Tools:** Oracle Data Integrator 11g/12c and OBIEE (BI tools), Data Analytics, Splunk Dashboards
- 508 Testing using **JAWS/ZoomText/Dragon on Databricks and Tableau in AWS environment.**

PROFESSIONAL EXPERIENCE

Booz Allen Hamilton Inc. | VA

Associate / Data Architect / Senior Data Engineer | Senior DBA October 2009 – April 2025

Supported high-profile projects at the IRS, NASA, FDA, and DHS, specializing in data architecture, data engineering, and database administration. Led teams in designing and implementing data solutions, migrating legacy systems, and maintaining complex data ecosystems in both on-premise and cloud environments.

Client: Internal Revenue Service (IRS) – Enterprise Data Platform (EDP) and EASA (Enterprise Architecture Strategy and Alignment) Projects
| Senior Data Engineer | August 2022 – April 2025

Contributed to a major data modernization initiative to build a scalable Enterprise Data Platform on AWS, demonstrating core competencies directly transferable to Databricks environment.

- Analyzed and validated end-to-end data pipeline architecture for the EDP WC2/Cade2ODS Data Pipeline, ensuring efficient data flow and processing.
- Developed and executed comprehensive data validation strategies and test cases for a multi-stage **data lake pipeline**, covering all stages EFTU, Dynamo DB, Glue ETL, Step Function, Lambda, SNS emails in Landing, Processing, and Refined Zones.
- Engineered test data strategies to identify potential failure points in Glue ETL jobs and Lambda functions, working directly with developers to implement remedies and resolve bugs.
- Utilized **SQL** and studied ETL logic to trace data transformations from raw TAR files through various processing stages, validating status updates in DynamoDB.
- Successfully tested and validated the DDIA ETL pipeline, contributing to the successful production release of EDP 2.1.1.
- Managed tasks and progress using **Jira** storyboards within an **Agile** framework, reporting daily in stand-up calls.
- Worked on 508 Compliance using tools JAWS/DRAGON and ZoomText. Developed work arounds for Databricks/Tableau for navigation of users of Blind/impaired vision etc and demonstrated to the senior managers of IRS.
- Worked on Solution Architecture Briefing Template of EASA
- Participated in Technical discussions of IRA EA Sprint Deliverables and EASA Scrum of Scrum (SoS)

Project: TFA IR Modernization Role: Technical Consultant May 2021 – May 2022

- Point of contact (**POC**) for Client directly in meetings and through emails to get clarifications on various issues to complete the tasks, resolve comments of Stakeholders.

- Participated in Enterprise Solution Architecture meetings as well as Augmented XML discussions to explore solutions.
- Worked on multiple Interface Control documents (ICDs) ICD 01, ICD 02, ICD 09 and ICD 07 with Visio diagrams.
- Arranged working sessions with Software Engineering and Data Engineering team members to complete ICD 07 from scratch to the level of acceptable document for Client/Stakeholders
- Worked on XML and JSON schemas of databases to identify Data gaps and important Data elements required, Data mapping and data elements and Error Handling.
- Worked with Client Staff on Data injection files to get inserted in database.

Client: NASA – Aviation Safety Reporting Systems (ASRS)

DBA / Python Programmer | February 2021 – April 2021

Provided critical database administration and development support for aviation safety systems.

- Developed **Python scripts** using PyCharm to automate the extraction, transformation, and loading (ETL) of data from a PostgreSQL production database into a newly structured Oracle ROLLUP table.
- Performed complex data fixes and data refresh operations across multiple Oracle and PostgreSQL databases using shell scripts and Data Pump.
- Guided analysts in executing advanced queries against **JSON/JSONB** data types in PostgreSQL.

Project: IT Asset Management (ITAM) | Role: Data Architect/Splunk Developer Jan 2020 to 12/31/2020

- Subject matter expertise on data bases and splunk platform with Python language skill
- Studied Data Orchestration Framework (DoF) project along with requirements and use cases. Study of all the source data from BigFix, ForeScout, Kisam, UCMDB and LPAR and identifying key elements and creating corresponding Dashboards, Boundary Reports and Variance Reports in Splunk Enterprise.
- Coding on Splunk platform and creating of multiple dropdowns for required fields and also multi select fields in boundary reports as per requests from users.
- Preparation of Simplified Design Document for ITAM project covering sources, Dashboard environment, Coding. Development of Data sets, Data models with fields

Project: Data Strategy | Role: Data Architect/Splunk Developer Feb 2019 to Dec 2019

- Prepared working environment for POC for IRS Data Strategy project by installing oracle 11g, MySQL, PostgreSQL, Splunk databases, Business Objects and Informatica Power Center
- Developing Alert monitoring tool on Splunk platform to analyze CPU and Memory utilization metrics, connected to multiple databases. Developed TSS life cycle and Future State Architecture Analysis, Informatica Architecture Analysis, Informatica iPass Analysis power point presentations.
- Met deadlines for client deliverables

Client: Census Bureau from **March 2018 to May 2018**

Projects: Census CTO Project | Role: Data modeler/Big Data Architect

- Worked for the CTO project as Big Data Architect.
- **Performed data cataloging and stewardship by creating a comprehensive metadata registry for all data elements from multiple Interface Control Documents (ICDs), including enumeration lists.**
- Worked on installation of Apache Hadoop and administration of HBase. Studied on MapReduce, key-pair values for storing, processing and querying the large size of Big Data files.

Client: Navy from **Jan 2018 to Feb 2018**

Project: OPNAV dealing with strengths/Gains process in recruiting sailors/officers| **Role Data Architect**

- Worked for the Navy project as Data Architect/ETL developer in analyzing 55 systems and 9 data warehouses.
- Studied the process of recruiting a Sailor as well as an officer for Navy and the existing data bases and systems to find the data exchanges between interfaces and found out the data gaps.
- **Using Microsoft Visio, developed detailed data maps and data models** to trace lineage and flow, identify gaps in documentation and opportunities for optimizing use of data. These gaps **identify risks and barriers** to effectively migrate data to the future state.
- Prepared the documents and delivered on time to client

Project: EFDS | Role: ETL Developer from May 2016 to Dec 2017

Duties include creating mappings corresponding to changes in database structure in **Greenplum(PostgreSQL)/Oracle**, running workflows, and monitoring and testing code updates on **Power center 9.6.1**

- Updated **Design documents** to reflect the **change request/implemented changes**
- Obtained text files from **Greenplum source** database(**PostgreSQL**) and **created external tables** through auto-generation using shell scripts by passing parameters. The same script can be **re-used** to create external tables for every table in database.
- Developed shell scripts to create external files with millions of rows of test data. Also, created **auto generated optimized loading scripts** for every target table in oracle database and used bulk insert technique to bypass Informatica and loaded **millions of rows** in target tables **in seconds**. Continuously monitored and tested loading in multiple tables in parallel successfully on the test server

Project: ACA 7.0 Enterprise Architect Role: Technical Architect May 2015 to April 2016

- Worked on multiple sections of BSR program and DSR documents and successfully implemented all dispositions required by Client.
- Worked on Architecture diagrams, Standard Design Documents, prepared Visio diagrams suiting all requirements of Client and delivered the diagrams on time. I was highly appreciated by project managers. Also, prepared power point presentations for client on Processing of Bulk data

Project: FATCA | Role: BO Developer from Feb 2015 to April 2015

- Installed BO and DB2 database in system, analyzed and resolved issues in Universe and Database
- Guided and migrated Dev universe from **Bo 3.1 to BO 4.1** and **SAT (test)** environment. Did testing and migrating of UNX reports of 4.1. Also, **submitted required Deliverables** on time to client which provided entire **status of project**. Developed optimized stored procedures and used **SQL tuning** to load millions of test data records and ensure high-performance query results (fetching data in milliseconds). Reduced time and cost of operations by 50%

Client: Internal Revenue Service (IRS) – Affordable Care Act (ACA)

Data Modeler / Data Architect / DBA | June 2012 – January 2015

Led the data architecture and database design for multiple high-visibility ACA projects from concept to production.

- **From scratch gathered requirements, created data models, designed database and proved POC for acceptance of client**
- **Analyzed requirements, gathered data, did gap analysis and building data models, involving data of employees, employers, multiple tax forms and credits satisfying all the requirements.**

- **Developed the full project architecture and Data Model for logical and physical using IBM InfoSphere Data Architect tool. Ran DDLs from model to create DDLs to create Physical database.**
- **Developed database with representative 1040 form data (TAX), EMPLOYER and EXCHANGE data. Delivered Database design documents, logical and physical data models, data dictionary, data gaps analysis for all projects**
- **Executed performance testing with millions of test data loaded by developing optimized stored procedures. Performed SQL tuning to fetch results from huge data in milliseconds.**
- **Developed SQL scripts for all test cases to get inserted in CDR database. Prepared XML files for EPD and TIN Cache to support testing. Developed Procedures to load data in millions of rows and retrieve them in XML files using DBMS_XML packages and XML tables. Used XPath and XQuery**

Client: PCAOB : Project: ARIA project | Role: Data Modeler/ETL developer Jan 2012 to Jun 2012

- Did Data extraction, cleansing, transformation and loading in ARIA staging/Persistence/EDW database and Business Intelligence Reporting System development using the Informatica Power Center 9.1 Created multiple user defined functions and power shell scripts. Worked with multiple source files
- Worked on stored procedures on SQL server. Handled multiple change requests for changed requirements resulting in updating of mappings

Client: Food and Drug Administration (FDA)

Project: UDID for equipment | Role: Data modeler/Data Architect/ DBA Sep 2011 Dec 2011

Gathering & analysis of data to create database for medical devices used in USA

- Using Happy Fish tool, **database model was created** and Installed **oracle 11g** on extranet and intranet servers
- Following security measures on development servers, tested various types of advanced replication techniques like Bi-directional or uni-directional advanced replication, oracle **streams**, oracle downstream capture, to create and maintain **identical databases**

Client: Food and Drug Administration (FDA) Sep 2011 Dec 2011

Project: SRP | Role: Informatica Developer

- Involved in upgrading of Informatica from 8.6 to 9.1
- Finding and resolving issues, Installation of client, configuration and testing of development server, development of code, routing for multiple processes, monitoring of workflows/log

files, setting of mappings, daily verification of all reports processed in production and running of workflows, reporting to users for reports

- **Project: eLEXNET** for US Laboratories | **Role: Data modeler/Data Architect/ DBA**
3/1/2010 to Sept 2010
- Administered applications on all Portal servers, Application Servers, Windows Servers, and Unix Servers and Provided **24X7 production support** & dealt with Data Quality analysis and fixed issues through data fixes. Interacted with **users/client** to resolve issues. Updated **Data Model using Erwin**
- Developed UNIX shell scripts for daily RMAN backups, cleaning of log files, maintaining storage space, alert messages operated through **CRON jobs** on UNIX servers
- Did **database migration** of Development, Test/ Production servers with oracle 10g on Solaris OS 10
- Completed installation of oracle software and database creation on **Development, Test, Production and Data Guard servers** and linked to Application servers successfully and Migrated the eLEXNET and NEIS databases into oracle **10g RAC space**.

Verizon Business | Ashburn, VA

Data Modeler / Lead DBA | 2000 – 2009

Led data modeling (logical/physical) using Erwin for enterprise applications, including reverse and forward engineering.

- Administered and performance-tuned Oracle 9i/10g databases on UNIX servers, managing large-scale database migrations (1+ terabytes) and implementing RMAN backup and recovery strategies.
- Utilized DataStage ETL tools to migrate data from legacy systems into a relational database architecture.

CERTIFICATIONS & RELEVANT TRAINING

- **AWS Certified Machine Learning Engineer – Associate(In Progress, targeting certification in 2026)**
- **Databricks Certified Data Engineer Professional (In Progress, targeting certification in 2026)**
- **Data Engineering with Databricks, Data Modeling in MongoDB & Denodo Data Virtualization Architect**
- **Architecting on AWS and Data Sources**
- **Microsoft Azure Administration and Security Technologies** (Pursuing Certification)
- Hadoop Architecture & Administration for Big Data Solutions
- **Project Management Professional (PMP)** – Project Management Institute
- Fundamentals of Agile (ICAgile Professional Certification)

- Sun Certified Programmer for the JAVA TM 2 Platform
- Trained on CompTIA Security+ to work in Cyber Security Projects
- Data Science Fundamentals 5 K with Python, Machine Learning and AI
- Administration of Oracle 11g
- Hadoop Architecture & Administration for Big Data Solutions
- Informatica PowerCenter 8.x/9.0 Level I Developer

EDUCATION:

MBA (Finance) – Institute of Public Enterprise, Hyderabad, India

- **M.S. in Chemical Engineering** – Indian Institute of Technology (IIT), Kanpur, India
- **B.S. in Chemical Engineering** – Regional Engineering College (REC), Warangal, India

SECURITY CLEARANCES :

Secret Clearance

Multiple Public Trust Clearances (**IRS**, FDA, DHS, Census Bureau)