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***Remote positions strongly favored. Internal HR recruiters & preferred vendors only. No third party staffing agencies who do not have an existing relationship with the employer.*

Overview

12 years experience as a Data Architect, BI Architect, and BI developer working with federal agencies, NGOs, telecom, and the retail industry

As a **Data Architect:**

I have designed, created, deployed and maintained data sources for clients encompassing the full spectrum of data architecture activities:

- Evaluating current-state architecture
- Assessing organizational data needs
- Agreeing upon a solution to meet those needs
- Data modeling
- Data mapping
- Database optimization
- ETL development
- Creating SQL queries and views for reporting
- Creating processes to maintain data integrity
- And more

As a **Business Intelligence Developer and Architect:**

I have worked on a project to project basis with variety of clients on their Business Intelligence applications. My specialization is in MicroStrategy & SQL. Over the course of these assignments, I have been involved with every aspect of the development life cycle including:

- Business Case & Requirements gathering
- Conceptualization & Proposal
- Installation & Implementation
- Database Design & Data Modeling
- Architecture/Schema & SQL Optimization
- Report Development
- Application, User Interface, and Dashboard Design for MicroStrategy Web and Mobile
- Production Support & Troubleshooting
- System Administrative responsibilities over Database and MicroStrategy Server environments

Tools & Skills:

- **Expert -** SQL, Erwin, MicroStrategy, Database clients (TOAD, SQL Developer, SQL Management Studio, etc)
- **Journeyman -** Informatica

Certifications
MicroStrategy Certified Developer & Engineer (MCD & MCE)

Education:
Penn State University
B.S., Chemical Engineering

Experience

Data Architect at **Deloitte**
Client: **Multiple Federal Agencies**
January 2019 - Present
Employment Type - Full Time

Overview - Data Architect working with federal agencies to design and develop a data lake for one division and profiling 60+ data sources for another division

*Due to a signed confidentiality agreement with Deloitte, exact client names for federal agencies will not be disclosed on this resume

Individual Projects

- **Data Lake -** To satisfy regulatory and auditing requirements, the client agency sought to create a data lake which served three purposes: 1. Reporting across multiple data sources 2. Capturing a historical list of changes occurring within the data sources 3. Timestamp and associated metadata of changes for auditing. An ETL process and microservices were used to ingest data source changes into the data lake. For system applications which used the data lake as its primary data source, only a DB trigger was required. This was a team effort, and I was responsible for the following components:
    - **Data Modeling** - The Data Lake Model was structured in a standardized format to meet the needs of most regulatory and reporting requirements. However, because the changes for the values of *all* pertinent fields from data sources were also required to be captured - and data sources occasionally did not fit cleanly into the data lake model, adjustments to the lake's table and key structure were required. I was responsible for

modeling these changes.

- **Change Control Process** - From simple column name changes to more complex ingestion of new data sources, frequent changes were applied to the data lake. Keeping the table, columns, and constraints in sync across development, testing and production was necessary to prevent breaking the ETL and microservice processes that populated the data lake. I was responsible for capturing and tracking these changes, as well as creating and deploying the SQL scripts which reflected those changes into all environments

- **ETL Development -** Along with microservices, ETL workflows using Informatica were created to ingest data from sources into the target data lake. I was one of the Informatica developers creating mappings & workflows for several use cases

- **Data Mapping -** I was responsible for writing technical documentation specifying the SQL logic needed to transfer data from the source into the lake. These documents were the primary source of technical specifications used by microservice developers, Informatica developers, and my own Informatica ETL development

- **Validation Scripts** - To verify ETL, micro services, and DB triggers were accurately inserting or updating into the data lake, a mechanism was needed to validate data transfers. Each data source usually had a key identifier column, typically the primary key on its main fact table. I was responsible for writing SQL scripts comparing the values of *all* source columns for a given identifier value VS data lake values for that same identifier and checking for discrepancies.

- **Custom Queries & Views -** Created SQL Views for various ad hoc requests that needed reporting across multiple data sources, which the data lake contained

- **Data & Domain Profiling** - This was separate from the aforementioned data lake. With Over 60+ Data sources supporting system applications across an agency division, many of these contained similar domain knowledge. This activity assessed the potential to share domain data in order to reduce redundancy and explore reporting capabilities across multiple sources. I mapped out all potential combinations of sources & domains VS other sources & domains. This was accomplished by a combination of a technical & functional approach - Querying Oracle system tables for a comprehensive list of tables, columns, and schemas of interest, programmatically determining whether domain ID fields were following a re-usable agency standard or specific to its system application, investigating data quality, and interviewing developers & functional leads for different system applications.

Senior Business Intelligence Architect at **Multiple Contracting Agencies**
Client: **Commodities Futures Trading Commission (CFTC)**
March 2016 - November 2018
Employment Type - Contract

Overview - I am a MicroStrategy Architect, Administrator, and Developer for the CFTC. During my time here, MicroStrategy has jumped from an obscure tool at the agency into a widely used, mission critical one. The work I am involved in has played a significant role in this transition

Individual Projects:

- **ITOP** - Short for IT Operating Plan, this Dashboard was used as a means to monitor the progress of all IT projects within the ODT department at CFTC. This was a notable project in that it used SharePoint as a datasource via XQuery and also put MicroStrategy on the map at CFTC. This Dashboard is regularly used by the CFTC CIO, Deputy Directors, Associate Directors, and all IT Managers. I was the sole architect and developer for this project.

- **Phone Records** - This Dashboard was used to assist in the federal investigation of an insider trading case. Specifically, it provided analysis on communication patterns between traders. I worked closely with CFTC attorneys and was the sole architect and developer for this project

- **SDLC Metrics** - This Dashboard is used as a quality control monitor for the ITOP Dashboard to ensure any erroneous or invalid values from the SharePoint backend isn't skewing aggregate results. I was the sole architect and developer for this project

- **Spend Plan** - A comprehensive Budget Analysis Dashboard for the ODT Department at CFTC

- **TCR Visual Analytics** - Visual Analytics based off Trading Data. These visualizations include Rankings, End of Day positions, Trade-Order tables, Neural Networks, Commodity Heat Maps, & Profit/Loss. All visualizations are available by both Traders & Accounts. This provides a quicker & interactive way to visualize the trading behavior of both Traders & their Accounts, allowing analysts to obtain the information they want without needing to write queries themselves

- **SDR Ticket Volume & Priority** - This Dashboard contains information on Ticket Volume, Assignment, Priority, & Age. These cross-exchange tickets are primarily requests relating to Data/Report Maintenance, enhancements, performance issues, and fixes. The original version of this Dashboard was created in Excel. The functionality in the excel-based dashboard became complicated enough such that any changes or maintenance required significant

effort. The MicroStrategy version of this Dashboard is far more robust, easier to maintain, and provides more features & enhancements over the original

- **CyberSecurity KPIs** - Analytics on self reported metrics by the CFTC cybersecurity team on the agency's data quality, talent, and technological capabilities

- **HR Organizational Statistics** - Reports + Analytics on CFTC Personnel on FTE Usage, turnover, and salary

System Administration: Supporting over 300 users, the CFTC MicroStrategy team is responsible for the upkeep, maintenance, and enhancement of the MSTR Enterprise platform at the agency. This entails all typical administrative responsibilities including (but not limited to) the MSTR security model, user management, project+object migration, settings, upgrades, etc.

Training & Support: Over the last few years, I have trained users who were interested in learning the basics of MicroStrategy. There are now around two dozen self-service BI users within the MSTR user base at the agency. These Web Analysts know how to upload data (or connect to a data source) via MSTR Web and build visual insight dashboards, some of which are used regularly in their own departments. In addition, I will answer technical questions or assist in troubleshooting

Senior Consultant at **Southport**
Client: **Multiple**
March 2015 - January 2016
Employment Type - Full Time

Ahold - I worked in production support for Ahold. This entails responsibilities you would typically find in a MSTR system administrative role such as gauging system performance through enterprise manager, troubleshooting server related errors, object and project migrations, upgrades, etc.

When beginning this project, there were a number of manual processes already in place that were both time consuming and an inefficient use of technical labor. Every morning, intelligence cubes on a schedule were checked to make sure they were published on time. This involved manually looking at the intelligence cube, checking any subscriptions associated with it, checking the schedule associated with that subscription, and then comparing last publish date with the expected last update per the schedule. There were a large number of cubes, so going through this process ate up a large portion of the morning. We wanted to automate this and free up time-labor hours by

1. Using a command manager script to display a list of cubes and their schedule information
2. Upload that output into an Oracle Database table
3. Add several additional columns including - Last publish date and expected last publish date

4. The last publish date was taken from Enterprise Manager statistics table. A store procedure was created that would take that info and join into the uploaded table. The store procedure also calculated the last expected publish date based on schedule information.
5. A report was created from this table and a threshold made to compare the last publish date vs last expected publish date. If the last publish date was earlier than the last expected date, it was noted on the report. This report was sent out daily through distribution services

   Additionally, the job queue was checked on an hourly basis in the mornings to make sure any scheduled subscriptions were clearing up. A similar approach was made to automate this task as well

Tory Burch - The company was in the middle of an SAP Conversion of its back end. As a result, many of the underlying tables their MicroStrategy reports previously relied upon were no longer available. The entire schema needed to be restructured to accommodate the changes made. There were originally a very large number and often redundant fact tables. This was consolidated into several and the schema converted into snowflake for simplicity. The schema changes turned out to be very robust and worked with the majority of their existing reports

OCTO - The Office of the CTO requested a Time & Labor Dashboard that performs HR Analytics on all District of Columbia government employees. The main focus on this dashboard was comparing employee ratings in different ways. For example, the average ratings of individuals who were promoted vs terminated vs transferred. Other examples include ratings across different departments, year over year trends of ratings, distribution of overall ratings, etc.

Dashboard Analyst at **Accenture**
Client: **Sprint**
June 2014 - March 2015
Employment Type - Contract

- **Sprint -** I worked alongside the business intelligence department at Sprint. We were responsible for the reporting of sales performance for different marketing initiatives. The data available to us spanned across a variety of hierarchies from account, geographical, marketing campaign, device, cell tower, and others. The reporting was for executives and account reps.

- **Executive Dashboard –** This is the primary and largest dashboard for executives. It provides an overview of sales. Information included in different tabs are marketing KPI's, device, port in/port outs,carriers,churn and others. This dashboard was built by the Sprint BI team and is in ongoing development with new features and sections regularly added. I provide support for the report and dashboard development.

- **Mobile –** I am a part of an ongoing initiative to put our current dashboards into a mobile phone friendly format. Having done similar work extensively in the past, I've reformatted critical components of the executive dashboard into an easy to read, easy to use, and intuitive layout. I regularly advise the rest of the team from a technical perspective on how best to proceed with

mobile BI.

- **Enterprise Manager –** The sprint BI team has a number of account reps looking at our current dashboards, and I've developed a dashboard based off this showing usage by person over time, by dashboard unique views, and percent to whole. An understated part of the development process was figuring how users actually use our dashboards, how EM interprets the data it collects, and how best to show what we're actually looking for. Prior to development, we asked ourselves "do most users click on x, y, or z? Does re-prompting the dashboard count as a new execution? How do we account for users who may look at a monthly report once and export it to a spreadsheet while others continually re-visit MSTRWeb?" All of these questions were necessary to ask and some extensive testing was done to validate the EM interpretation of user actions.

- **CL Dashboard –** An ongoing project. I was responsible for object architecture, conceptualizing, reporting, and dashboard development on account rep performance

Senior Software Engineer at **HCL Technologies**
Client: **AARP**
November 2013 - June 2014
Employment Type - Full Time

- **AARP** - I worked in production support for our client, AARP. The business intelligence reporting was based off of two types of data: risk assessment data during organizational changes, and membership information - with the primary end goal of using this to maximize membership rates

- **Data Analysis & Validation** – The DB warehouse on top of the MicroStrategy environment is derived from a large, complex series of ETL mappings and staging tables tracing back to the mainframe. MicroStrategy itself had objects with elaborate mappings as well. One consistent concern our client had was whether the numbers shown in reports were correct. The concerns stemmed from a variety of reasons: sometimes new reporting off of newly created tables and MSTR schema objects, sometimes an ETL load would fail to trigger and we'd need to check to see if there was a discrepancy between the relational tables, or just general justification of the numbers behind the report. This was done primarily by checking the logic of the SQL generated from reports and querying the database tables directly at different points in the ETL process.

- **Risk Model / CIO Dashboards** – Using raw data and requirements provided by the finance department at our client, I created a series of dashboards for executives. The main goal was to provide an intuitive, useful, easy to read, visually appealing interface to enable the C level with more decision making tools.

- **Miscellaneous requests** – This can be anything from creating a new report for business users, fixing random bugs, creating new objects, providing users access to specific projects, migrations, creating subscriptions, using Enterprise Manager to gauge report/dashboard usage,

using Integrity Manager to check for broken reports after major system changes, and many more tasks typical of using the MicroStrategy product suite.

Mobile Data Architect at **MicroStrategy**
Internal Role
August 2010 - October 2013
Employment Type - Full Time

- **Overview -** While at MicroStrategy, I worked under the mobile department on a variety of business intelligence applications with our partners, prospects, management, account executives, sales engineers, UI Designers, and technology. The only difference between mobile and standard BI is that mobile is showcased on an iPad or iPhone. The back end is the same.

  The purposes of these applications were three fold:

  1. Developing production level BI Apps for partners or for us to use internally

  2. Customer Data Engagements (POCs) for our Sales Engineers and Account Execs to demo to prospects through our internal Superlink Mobile Application

  3. Taking some of apps above, modify the look and feel of the BI application so that it has a "mobile" feel to it (if it didn't already), and putting it on our app store. You can view some of these projects on an iPad and iPhone by downloading MicroStrategy Mobile on the Apple app store.

- **System Administrator -** In addition, I was an administrator responsible for maintaining MicroStrategy environments for over 1000 internal users (Superlink) and for the Mobile App Store (over 400,000 downloads since 2010). The environments include over a dozen servers, including development, testing, and production environments as well as servers dedicated for our partners and beta releases. The production servers are clustered and the mobile/web server reside in a different location than the i-server. I, along with 2 other administrators, were responsible migrating projects and changes, upgrading metadatas, fixing problems found by field sales (eg. "This app is returning an error on the superlink, can you take a look?), running schedules, subscriptions, and virtually everything else that's typical of a MicroStrategy administrator. In addition, I was also the interface with our MMSQL DBAs in various departments, often making recommendations to our team and performing maintenance regarding anything related to the data warehousing aspect and database maintenance

- **Individual Projects:**

  * Indicates this project was once available on the app store

- ***Alert Assisted Store Walk** – an extremely comprehensive dashboard meant for a store manager to monitor real time Sales, Profits, Inventory, Loyalty Card Usage, and who is/isn't currently working in the store. I was the technical lead responsible for the overall architecture and managed 3 others during this project.

- **Loss Prevention** – We used retail data to predict when theft among employees may occur. This was a fairly interesting project as there isn't a straightforward way to predict theft. Most of the analysis had to deal with odd occurrences within the database. For example, why does Cashier 99 in Store XYZ have so many transactions in which he sold the item for only 1 cent? Why does this employee have a large amount of voided transactions on Thursdays even though he or she isn't working at the customer service desk? I was the sole developer on this project, from gathering requirements, performing every typical BI all of the way to creating the user interface. I was the sole developer on this project.

- ***Banking Analysis** - Using publicly available FDIC information, we analyzed and compare performance between 7000 banks. I developed the reports and front end for use on the iPhone

- **Endless Aisle** - An app demo meant for shoppers to compare prices, review, and deliver items to their home. Think of it as a marriage between yelp & amazon, except using the MSTR platform and used for demonstration purposes. In theory, a client could unveil a similar application for their shoppers. Yes, we can use MicroStrategy to do this even if it's not quite BI. I was the sole developer of this project.

- ***Flight Analysis** – Using publicly available data from the Federal Aviation Agency, we created an app that compares performance between airports and carriers so that the user can better decide which carriers to choose and when not to fly in order to avoid delays. I was a report and front end developer for this project.

- **Crime Prevention** – Using Data from the Arlington, TX Police Department, where, when, how often, and what type of crimes take place help officers know which areas to patrol. I was the sole developer of this project.

- **Hot Leads** - An internal application used to capture leads at tradeshows and conferences. Heavily uses MicroStrategy's transaction write back capabilities. I was the sole developer of this project.

- ***Events** – An App that public users can use to sign up for MicroStrategy related events, conferences, tradeshows, etc. I was responsible for modifying and upgrading the backend once our IT infrastructure was changed internally.

- ***Customer Insight** - Partner with Accenture, we determined the effectiveness of advertisement campaigns and whether or not sales figures were impacted. I was the report and front end developer.

- **Enterprise Manager Monitoring App**. (to be OOTB as a part of the enterprise

manager suite soon. Will likely be on the app store as well). This is an internal app that's used to see which employees are regularly using the superlink, how often, for how long, and for which projects. This lets us know which projects/apps are causing a lot of activity in the field and within the market, and which ones are being ignored. Ultimately the end goal here is to figure out what verticals or horizontals we should be focusing on the most. I worked with several others on all aspects of this project, from configuring the data load all of the way to the front end. In addition, I would regularly send analyst reports to upper management and tell them of my findings.

- ❑ ***Food & Beverage Analytics / Restaurant Trends** – Partnered with GuestMetrics, this application analyzes purchasing habits at restaurants. I was the sole developer for this project.

- **Associate Sales Engineer:** ~15 Customer Data Engagements (POCs) – As a part of sales cycles, prospects often want to see "mini implementations" before choosing to purchase any Business Intelligence vendor to ensure we can deliver on our promises. Our customers were typically F500 or mid sized companies. They would send a sample of their data – for example, retail transactions for Stores X, Y, and Z for the week of July 22nd 2012 and ask us to build out a dashboard to their specifications within the scope of MSTR's capabilities. My involvement varied from CDE to CDE. Typically, I would work with 1 or several Sales Engineers and sometimes was the sole developer, and other times work with the more technically inclined SEs to build these out.

Sales Engineer at **ABB**
Internal Role
June 2008 - January 2010
Employment Type - Full Time

- **Overview -** Sales support for circuit breakers and transformers