### **Gerard Bartolome**

https://github.com/polyglotDataNerd

**OBJECTIVE:** A career in internal and/or external IT and E-commerce consulting or auditing involving data platform architecture and engineering, database analytics, data warehouse architecture, application development, software implementation and operation risk management.

- Languages: Java, Golang (1.14), Spark-Scala, Python, Node.js, C#, C++, Transact-SQL, PL/SQL, ANSI SQL, Terraform HCL
- **Data Store**: Amazon Redshift, Sql Server (2008-2014), PostgreSQL, MySQL, Redis, Cassandra 3.0, DynamoDB, Oracle (9i, 10g, 11g)
- ETL/ELT: Homegrown Java Driven ETL Applications, Kafka, AWS Kinesis, AWS Lambda, IBM Datastage, Informatica Powercenter, MS DTS Packages, MS SSIS, Talend Open Studio
- Business Intelligence: Tableau (8-9), Business Objects XI R2; Business Objects BI Platform
   4.0, MS Reporting Services, Crystal Reports
- Data Modeling: ErWin, MS Visio, Lucidchart
- Software: AWS Big Data Stack, MS Office Suite, MS Project
- Systems/OS: Linux, GNU, Windows and open source environments

Speaker: AWS re:Invent 2019: Implementing a data lake on Amazon S3 (STG359-R).

### **Customer spotlight**

#### Sweetgreen



"We have 31 data sources....we wanted to be autonomous and adaptable...as fast as the data changes and grows, we can adapt. Our greatest insight was how much food to cook per day, per time period. It drives sustainability and minimizes waste while allowing us to present the best food possible, driving operational efficiencies."

Gerard Bartolome, Principal Data Engineer - Sweetgreen

#### **EDUCATION**

Louisiana State University Baton Rouge, LA Bachelor of Science Computer Science/Managerial Informational Science 1997- 2001

#### **WORK EXPERIENCE**

#### sweetgreen

February 2018-March 2020

### Principal Big Data Engineer/Architect:

Environment: AWS (Kinesis, Lambda, API Gateway, EMR, Redshift, RDS, SQS), Spark 2.4, PostgreSQL, MySQL, Redis, DynamoDB, Docker to AWS Fargate Languages: Java, Golang, Python, Scala-Spark, Node.js, SQL, HCL Data Platform: AWS Redshift/EMR-Hadoop, Hadoop HUE, RESTful API Services

 Subject matter expert on data design, architecture and development of big data related platforms for analysis, machine learning, recommendation and user experience engines along with day to day business operations.

#### Projects:

- Design:
  - Kimball methodology to create a warehouse model within an MPP along with a cloud-based Data Lake to integrate data into a scalable data store and dynamic data store.
  - CCPA framework to anonymize PII data in sg Data Lake. Includes ad hoc deletion from the object store when user requests to be deleted.

- Developed:
  - Ingestion applications built in microservices framework Dockerizing services and pushed to AWS Fargate using Terraform.
  - Open source ETL/ELT applications that integrate many disparate sources into a language agonistic data platform in AWS.
  - Consolidated many different sources for user experience, event driven streams, analytics and personalization for our four wall operations, digital customers and store wide fleet.
  - Built review scraper to search different public sites for sweetgreen reviews used in ML sentiment utilizing Golang's goroutine/go channel framework.
  - Built server-less clickstream interface to ingest real time event payloads into Spark and Redshift for use with CRM and analytic platforms.
  - Built an optimization app to predict store ingredient demand within 15minute intervals to better equip our store fleet on how much to cook based on sales, forecast, labor, customer traffic behavior and digital behavior.

#### **Beachbody On Demand**

October 2015-Feburary 2017

### Big Data Engineer/Architect:

Environment: AWS (Kinesis, Lambda, API Gateway, EMR, Redshift, RDS, SQS), Hadoop, Spark, PostgreSQL, MySQL, Cassandra 3.0, DynamoDB

Languages: Java, Python, Node.js, hiveQL, Scala-Spark, SQL User Experience Platform: AWS Redshift/EMR-Hadoop/Kinesis

• Subject matter expert on data design, architecture and development of big data related platforms for analysis, machine learning, recommendation and user experience engines along with day to day business operations.

#### Proiects:

- Lead big data engineer for Beachbody's on Demand Service
  - Design:
    - Kimball methodology to create a warehouse model along with a cloud based Data Lake to build and integrate data into a scalable data store.
  - Developed:
    - Open source ETL/ELT applications that integrate many disparate sources into a platform in AWS.
    - Built Terabyte sized data platform from many different sources for user experience event bus and personalization for On Demand service.
    - Built a server-less clickstream application to ingest real time data payloads into Hadoop and Redshift for use with real time recommendation and analytic platforms.
    - Built machine learning personalization recommendation engine using Spark ML Collaborative Filtering rankings from user workout behavior.
    - Built Alexa skill to interact with voice recognition metrics on content usage using a server-less stack that ingests into Redshift transform and puts metrics into a state table in DynamoDB for Alexa to reference.

### **NBCUniversal/Fandango**

August 2013-September 2015

#### Data Engineer/Architect:

Environment: Amazon Web Services, Hadoop, Spark, Omniture, PostgreSQL, MySQL, MS SQL-Server

BI Platform: AWS Redshift and Tableau Server 9.0

• Subject matter expert on data design, architecture and development of big data related platforms for analysis, machine learning and day to day business operations.

#### Projects:

- Lead engineer for Fandango's big data platform
  - Design:
    - Used the Kimball methodology to create a star schema model to build and integrate data into a star schema like structure that is scalable and agnostic
  - Developed:
    - Integrated onPrem data centers with cloud environments by peering one another to build a hybrid Data Lake.
    - Used a myriad of tools to form ETL/ELT applications to integrate many disparate sources into a platform in AWS.
    - Utilized java, python, Scala, hive, spark, pig and database procedural language along with new cloud technologies to implement and monitor automation for the whole ETL/ELT lifecycle.
    - Built terabyte sized data platform from many different sources for a plethora of uses i.e. insights, machine learning, forecasting and predictive modeling for the business.

#### Stylesight Inc.

February 2012-2014

### **Data Warehouse/Business Intelligence Architect:**

Environment: MS SQL-Server 2012 BI Edition, MySQL 4.0-5.1, Salesforce, Omniture, Marketo Tools: MS Business Intelligence Suite (SSIS/SSAS), Talend Open Studio BI Platform: SAP Business Objects 4.0 Edge

 Subject matter expert on data design, architecture and development of client acquired database systems from MySql, Salesforce, Marketo and Omnitutre

### Projects:

- Architected data warehouse (star schema design) for Stylesight Inc.
  - Design:
    - Used the Kimball methodology to create a star schema model to build and integrate data into a data warehouse from many disparate sources.
  - Developed:
    - Used SQL 2012 stored procedures as main ETL tool along with Talend Open Studio for Salesforce extraction and SSIS for Omniture.
    - Utilized indexing methods and optimized the ETL process using the new features of SQL 2012.
  - Maintenance/Enhancements:
    - Main DBA for SQL Server 2012 to check database heath and query optimization.
    - Main developer of new enhancements to the data warehouse and BI Platform.
- Built and designed Stylesight's BI Platform using SAP Business Objects 4.0 to create a
  presentation reporting application for the business.
  - Design:
    - Used current data warehouse to build universes for clickstream, sales, client services, market strategy and finance metrics

- Developed:
  - BI report creation using BO Desktop Intelligence.
  - BI report creation using BO Web Intelligence.
  - BI report creation using BO Explorer.
- Operational:
  - BO administration, setup and maintenance
  - Setup roles, groups and maintain privileges for all BO users

### MTV Networks

January 2010-2012

### **Data Warehouse Architect/Developer:**

Environment: Windows/ Linux, MS SQL-Server 2000-2008, Oracle 10g, SAP Tools: MS Business Intelligence Suite (SSIS/SSAS), IBM Datastage, Powerbuilder BI Platform: Business Objects XI R2; Business Objects BI Platform 4.0 Enterprise

 Subject matter expert on data design, architecture and development of client acquired database systems from OLTP, Data Warehouse (Dimension/Fact Star Schema and ODS design) along with other transactional systems.

#### Projects:

- Architected data warehouse (star schema design) for Consumer Products and Ancillary Sales for MTV Networks.
  - o Design:
    - Used the Kimball methodology to create a star schema to build data analytics for Forecast, Budget, Royalty, Cash and Invoice reporting.
  - Developed:
    - Used SQL 2008 stored procedures as main ETL tool from many disparate sources to do the extract and transformation.
    - Utilized indexing methods and optimized the ETL process using the new features of SQL 2008.
- Developed Business Objects XI R2, Business Objects BI Platform 4.0 Reporting Universes for Consumer Products and Ancillary Sales.
  - Design:
    - Used current data warehouse to build universes for Forecast, Budget, Royalty, Cash and Invoice.
  - Developed:
    - BI report creation using BO Desktop Intelligence.
    - BI report creation using BO Web Intelligence.
  - Operational:
    - BO administration, setup and maintenance
    - Setup roles, groups and maintain active directory privileges for all BO users
- Lead database developer for Consumer Products Content Management System.
  - o Design:
    - Database developer for CP Powerbuilder application.
  - Developed:
    - Maintain current logic of transactional database
    - Create stored procedures/triggers/functions for new enhancements to the CMS
  - o Operational:

Database optimization and maintenance.

### **Navigant Consulting**

December 2008-2010

### **Managing Consultant:**

Data Analytics, BI/DW and Forensics for E-Discovery Practice

Environment: Windows, DOS, MS SQL-Server 2005-2008

Tools: MS Access, MS Business Intelligence Suite (SSIS/SSAS)

 Subject matter expert on data design, architecture and development of client acquired database systems from OLTP, Data Warehouse (Dimension/Fact Star Schema and ODS design) along with other transactional systems.

### Projects:

- Designed/Developed/Implemented a star schema database for the Pharmaceutical Practice for trend reporting in a three year period to look for market trend and predict future and past drug trends for (hypertension, diabetes and hypercholesterolemia).
  - o Design:
    - Used the Kimball methodology to create a fully normalized star schema using dimensional tables i.e. Date, Drug Information, Region/Location/District to join to aggregated Fact table.
  - Developed:
    - Used SSIS as main ETL tool from many disparate sources to do the extract and transformation of dimensional tables.
    - Created MS-SQL procedures to do quality control and load/append to persistent staging tables to production dimensions.
      - Used T-SQL to create aggregate reporting for trend analysis.
  - Implemented/Supported:
    - Responsible for object integrity and performance of database:
      - Created indexes on primary to foreign key relationships
      - Daily statistics refresh of bottleneck tables
      - Used query optimizer and execution plans to improve cost and performance of reporting queries.

BearingPoint April 2007-Dec 2008

#### **Senior Technology Consultant:**

Data Warehouse Developer and Support Analyst: Pfizer Financial DW/Global Info Factory Environment: Oracle 9i and 10g, Unix, Windows

Tools: IBM Datastage, Informatica PowerCenter, Business Objects XI, ErWin, SQL Navigator

- Developed ETL packages in PL/SQL using a Star Schema model (Kimball approach) for Pfizer's financial data using both Datastage and Informatica as main ETL tools.
  - Used ETL tools to extract to non-persistent and persistent staging tables with some business rule transformations.
  - Used PL/SQL to do main transformation rules from integrity lookups to errorhandling and append to main production tables.
- Supported Pfizer's FDW with day to day ad hoc data issues.
  - Liaison to BO XI developers for client and reporting needs
  - Ran cost and statistics analysis for health and integrity of database objects
- Lead support analyst for Pfizer's Global Information Factory ODS schema (Inmon approach).
- Created functions (in PL/SQL) and views for downstream reporting by business users.

#### Operational

- Responsible for day to day health of data.
- Main liaison for business users to communicate with.
- Created ad hoc Business Objects reports from different DW Universes.
- Indexing/Analyzing Object structure and Integrity
- Monitor and debug ETL Loads

### CaseCentral

Feb 2005-April 2007

### Senior Database/Data Analyst:

Senior Database/Data Analyst Lead for Major ETL, QC, and Architectural Data Projects Environment: MS SQL Server 2000 and 2005, Oracle 10g, Texis DB, Linux and Windows Tools: IBM Datastage. MS Access, MS Excel

- Created, supported and implemented data flow functionality to efficiently move raw data from point to point.
- Created tools and efficiently maximized T- SQL to improve ETL processes of data flow movement
- Lead and was independently responsible for all litigation lifecycle management processes for top three biggest projects for CaseCentral.
- Supported both the backend QC and front end client interaction.

### **BearingPoint**

Jan 2003-Jan 2005

### **Technology Consultant**

Data Analyst Lead: Visa Online Data Migration Project

Environment: Migration Data Warehouse MS SQL Server to Oracle 10g

Tools: MS Access, MS Project, MS Visio

- Supported VOL Systems Engineering with design of 3-tier server infrastructure
- Gathered technical data to create Gap Analysis of software requirements for servers being migrated
- Created Access database to track audit and validate servers that are in VOL production being migrated to new data center.
- Responsible for logical design of new severs being migrated to new location.
- Logistical tracking and analysis of software components migrating from old data center to new location
- Efficiently maximized T- SQL to improve ETL processes of data flow.

### Operational

- Created Ad-Hoc data used for daily reporting
- Technical liaison between VISA business units and systems engineers.

## **Database Analyst: Wells Fargo Business Direct**

# **Operational Analysis:**

Environment: Oracle 9i

Tools: MS Access, SQL Navigator, Cognos Reporting Suite, MS Excel

- Analyzed consistency of data over a time series to use for key sales indicators.
- Responsible for extracting data for daily trend analysis
- Ad Hoc data extraction for different levels of reporting used by business analysts
- Reengineer SQL code to solve problems and optimize data resources.
- Tested data consistency of Wells Fargo's Integrated Business Data Depot Data Warehouse by analyzing:
  - Data Warehouse Schema
  - Entity Relationship Diagrams

- o GAP Analysis
- o Flag outliers, i.e. duplicates, bad data etc...

### Development

- Created Ad-Hoc data used for daily reporting
- Administer database privileges
- Optimize and indexed existing code for simplicity
- Developed data warehouse flags to identify "bad data"

SquareTrade March 2002-Dec 2002

### **Risk Management Consultant**

Environment: SQL Server 2000, Oracle 9i Tools: MS Access, TOAD, MS Excel

- Used DB tools such as UNIX, Toad, T-SQL ++, MS SQL, and Postgres SQL to data mine
  past information on sellers. Analyzed feedback level ratios and number of cases not
  responded to using a proprietary Online Dispute resolution service. Validated sellers
  using eBay informational cache combined with SquareTrade's service tools.
- Independently made decisions to reject sellers who failed to pass criteria and requirements for using SquareTrade's services.