

# Shawan M. Bajwa

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## **ABOUT ME**

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As a seasoned database architect with over a decade of rich and diverse experience, I bring a profound expertise in SQL, advanced database design, and meticulous administration practices. My proficiency spans across NoSQL technologies and sophisticated cloud database services, including AWS RDS and Azure SQL, where I have designed scalable and resilient solutions. Skilled in orchestrating efficient ETL processes and establishing robust data warehousing systems, I adeptly leverage BI tools like Power BI and Tableau to distill complex datasets into compelling, actionable insights. My repertoire extends to integrating DevOps practices, mastering scripting with Python and JavaScript, and excelling in modern infrastructure management techniques using Docker, Kubernetes, and Terraform. I am deeply committed to embracing cutting-edge trends such as big data, real-time processing, and machine learning fundamentals, continually expanding my knowledge to stay at the forefront of technological innovation. This relentless pursuit of excellence and a comprehensive skill set make me a dynamic force in navigating and shaping the ever-evolving tech landscape.

## **WORK EXPERIENCE**

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### **Senior Data Solutions Architect**

*Arbisoft* 01/11/2020 – Current

#### **Responsibilities:**

- Configured and managed cloud database instances across AWS RDS, Azure SQL Database, and Google CloudSQL, ensuring optimal configuration for performance, security, and scalability to support enterprise-level applications.
- Automated cloud database provisioning, updates, and scaling operations using infrastructure as code tools like AWS CloudFormation, Azure Resource Manager templates, and Google Cloud Deployment Manager, enhancing operational efficiency and reducing manual intervention.
- Engineered real-time data processing solutions by integrating Kafka with Spark Streaming, facilitating the ingestion, processing, and analysis of streaming data for immediate insights and actions.
- Architected and deployed data warehousing environments in Redshift and Snowflake, utilizing columnar storage and massively parallel processing (MPP) architecture to accelerate complex analytical queries over petabyte-scale datasets.
- Optimized data warehousing solutions for cost and performance, implementing data lifecycle policies, table partitioning, and materialized views to reduce storage costs and improve query performance.

- Designed and developed comprehensive BI solutions using Power BI and Tableau, connecting to various datasources to curate interactive reports and dashboards that provide real-time business insights and support data-driven decision-making processes.
- Integrated advanced analytics and machine learning models within BI platforms, enabling predictiveanalytics and data mining capabilities directly within dashboards and reports.
- Leveraged Entity Framework and Hibernate ORM frameworks to abstract database interactions in application development, enhancing developer productivity and application maintainability by aligning database operations with object-oriented principles.
- Tuned NoSQL database implementations in MongoDB and Cassandra for performance and scalability, applying sharding, replication, and consistency tuning to meet the demands of high-throughput and large-scale applications.
- Developed comprehensive data governance and quality frameworks, ensuring data integrity, accuracy, and compliance with regulatory standards across all database and data warehousing solutions.

### **Technical Expertise:**

AWS RDS, Azure SQL Database, Google Cloud SQL, AWS CloudFormation, Azure Resource Manager, Google CloudDeployment Manager, Kafka, Spark Streaming, Redshift, Snowflake, Power BI, Tableau, Entity Framework, Hibernate, MongoDB, Cassandra, infrastructure as code, columnar storage, massively parallel processing (MPP), data lifecycle policies, materialized views, advanced analytics, machine learning models, predictive analytics, data mining, sharding, replication, data governance, Prometheus, Grafana, Python, SQL, NoSQL, BI platforms, real - time data processing, cloud database provisioning, automated scaling, interactive reporting, dashboard development, performance tuning tools, data quality frameworks, and regulatory compliance standards.

### **ETL Specialist & Data Warehouse Engineer**

*Systems Limited*

03/18/2016 – 06/29/2019

### **Responsibilities:**

- IDesigned intricate ETL pipelines using SSIS and Informatica, integrating data from disparate sources including SQL databases, NoSQL stores, and cloud-based repositories, ensuring consistency and accessibility of data across the organization.
- Implemented advanced data transformation logic to clean, normalize, and enrich datasets, facilitating accurate and reliable data analytics.
- Configured and optimized ETL processes for parallel execution and batch processing, significantly reducing data latency and improving throughput for time-sensitive analytics.
- Leveraged data warehousing techniques to structure data in star and snowflake schemas, enhancing query performance and supporting complex analytical queries in BI tools.
- Utilized dimensional modeling to represent business processes, enabling intuitive access and analysis of data for end-users.
- Deployed data warehouse solutions on scalable platforms, ensuring high availability and disaster recovery capabilities through replication and backup strategies.
- Integrated MongoDB and Cassandra for specific use cases requiring high throughput and flexible dataschemas, such as real-time analytics and large-scale web applications.

- Conducted rigorous performance tuning of NoSQL databases, optimizing indexes and query patterns to meet the demands of high-velocity data workloads.
- Collaborated with data scientists and analysts to provide a data infrastructure that supports advanced analytics, machine learning models, and data visualization projects.
- Automated data warehouse and ETL pipeline deployments using CI/CD practices, improving the reliability and speed of data delivery to business units.

### **Technical Expertise:**

SSIS, Informatica, SQL Server, Oracle, PostgreSQL, MongoDB, Cassandra, Redis, Hadoop, Spark, Azure Data Factory, Google Cloud Dataflow, AWS Glue, Talend, Power BI, Tableau, Qlik, Snowflake, Redshift, BigQuery, Kafka, Airflow, NiFi, Docker, Kubernetes, Jenkins, Git, Grafana, Prometheus, Elasticsearch, Kibana, Logstash, Python, R, Jupyter Notebooks, DBeaver, HeidiSQL, Pentaho, Looker, SAP Data Services, Microsoft Excel, Google Sheets, Azure SQL Data Warehouse, Oracle Data Integrator, Matillion, Zabbix, Nagios, Splunk, Ansible, Terraform, VMware, Hyper-V.

### **Database developer**

*Agile Tech Solutions* 02/19/2013 – 07/18/2016

### **Responsibilities:**

- Engineered comprehensive database schemas to support complex business applications, focusing on normalization, data integrity, and referential actions to ensure data consistency and reduce redundancy.
- Crafted and tuned intricate SQL queries, optimizing execution plans and indexing strategies to enhance performance on large datasets exceeding terabytes in size, particularly for transactional processing and analytical reporting.
- Implemented and refined stored procedures and functions to encapsulate business logic within the database layer, significantly reducing application-layer complexity and improving data processing efficiency.
- Devised dynamic data partitioning strategies to manage data growth effectively, ensuring scalable storage solutions and maintaining high query performance through optimal data distribution.
- Established rigorous database security protocols, including role-based access control, encryption of data at rest and in transit, and regular vulnerability assessments, to fortify data against unauthorized access and potential security threats.
- Conducted exhaustive performance benchmarking and stress testing on database systems, utilizing tools like SQL Profiler and Database Engine Tuning Advisor to identify bottlenecks and optimize resource utilization.
- Collaborated closely with cross-functional teams to align database design with application development and business requirements, ensuring seamless data flow and integrity across microservices and distributed systems.
- Curated custom monitoring dashboards using tools like Grafana and Prometheus, paired with tailored alerting mechanisms, to provide real-time insights into database health, query performance, and transaction volumes.
- Led initiatives to automate routine database maintenance tasks, such as backups, index rebuilds, and statistics updates, employing scripting languages like PowerShell and Bash to enhance operational efficiency and minimize downtime.

### **Technical Expertise:**

Oracle, Microsoft SQL Server, PostgreSQL, SQL Server Management Studio (SSMS), Oracle SQL Developer, pgAdmin, Transparent Data Encryption (TDE), Oracle Database Vault, SQL Server Always Encrypted, SQL Profiler, Oracle AWR (Automatic Workload Repository), pgBench, Git, SVN, Grafana, Prometheus, PowerShell, Bash, Ansible, Confluence, Microsoft SharePoint.

## **MASTERY**

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### **Skills**

- SQL, PL/SQL, T-SQL
- Database Design & Architectural Planning
- Data Modeling & Schema Design
- Database Administration & Security
- Performance Tuning & Query Optimization
- Backup & Disaster Recovery Strategies
- ETL Development & Data Integration
- Data Warehousing & Business Intelligence
- NoSQL Technologies (MongoDB, Cassandra, Redis, Neo4j)
- Cloud Database Services (AWS RDS, Amazon DynamoDB, Azure SQL Database, Google Cloud SQL, Google Bigtable)
- Data Visualization Tools (Tableau, Power BI, QlikView)
- Reporting Services (SSRS, Crystal Reports)
- ORM Technologies (Hibernate, Entity Framework, Django ORM)
- Big Data Technologies (Hadoop, Spark)
- Data Pipeline & Workflow Management (Apache Airflow, Luigi)
- Real-Time Data Processing (Apache Kafka, Apache Storm)
- Containerization & Virtualization (Docker, Kubernetes, Vagrant)
- Version Control Systems (Git, SVN)

## **EDUCATION**

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### **Bachelors Of Computer Science**

*Virtual University*