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Professional Strength

Senior/Lead Data Engineer, DBA, specializing in team work, high availability, full stack high volume performance oriented architecture, data warehouses, operational data stores, business intelligence, data analytics, near-real-time data streaming, extract/load/transform processes.

Current Technical Skills

Data	• MySQL, MariaDB, Percona latest, PostgreSQL latest, Oracle 6-11g, DB2 7-11, MongoDB, AWS DBs (Aurora, RedShift, DynamoDB, RDS), Google Big Query, Salesforce. • Architecture, administration, development, system/instance/sql performance tuning, logical & physical schema design, OLTP Normalization, OLAP (data warehouse) dimensional modeling and de-normalization, ETL processes, migration, replication, clustering, sharding, partitioning, parallelism, restores and backups.
Software	• Python with Pandas, Flask, SQLAlchemy libraries. Java, AWS S3, SQS, SNS, Glacier APIs. ANSI-SQL, MySQL SQL/PSM, Oracle PL/SQL, Postgres PL/pgSQL. XML, JSON, REST. SQL DDL & DML expert. Cassandra, Elasticsearch, Kafka, Docker. Relational and procedural language expert. • Compiled Languages: C/C++ > 1994: GNU & native compilers, linkers, debuggers, profilers, file systems, daemons, processes, threads, TCP/IP, IPC, RPC, POSIX. • Methodologies: Agile/Scrum, test-driven. • Source code control: Git.
Platforms	• MSWin 1985 <> 1994, Unix > 1991, GNU/Linux > 1994, MacOS > 2014. Cloud: AWS > 2014, GCP > 2016. • AWS Infrastructure, Distributed LAMP stack system administration, virtualization, tuning, source builds, configuration. Shell scripting (sh, bash, zsh), cron, sed, awk, grep, regexes, etc.

Achievements

Comcast, Denver, CO
Lead Data Engineer   2021-2022
- Working in concert with Comcast team and K2View Consultants, lead development and deployment of proof-of-concept, development, pefomance testing, and production instances of K2View Fabric.
- Utilized Packer and Terraform to provide solid and repeatable IAC deployments.
- Final deployments featured hardened, geo-distributed, three-node clusters of K2View Fabric, Cassandra, Elasticsearch, and Kafka.
- Worked with large team and junior data engineers to develop mostly java integrations from various Comcast data sources, including data lake and headwaters (near-real-time data streams).
- Use cases involved enabling data aggregation and search capabilities for middle-tier (department level) data sources and integrations.
- All products implemented with a best-practice security principles to protect all data and specifically personally identifiable information.
- **Tech**: Amazon Web Services (EC2, S3, IAM, Kinesis), Comcast Cloud Platform, Docker, GraphQL, Java, Node.js, Cassandra, Kafka, Elasticsearch running on Redhat Enterprise Linux.

Intelepeer Cloud Communications, Centennial CO, Dania Beach FL, San Mateo CA
Senior / Lead Data Engineer / DBA 2016 - 2020
- Architected and achieved on-time delivery of 10TB Business Intelligence Data Warehouse using Kimball methodology for product, marketing and C-level teams.
- Designed, developed, optimized operational data store (ODS) for Trunk Group Database which is used for telecom call routing and reporting. Data flows included proprietary call detail records, routing information, Salesforce, DB2, MongoDB, Google Big Query.
- Developed, optimized, maintained multi-threaded Java application with AWS S3, Glacier, SNS, SQS APIs to pull terabytes of voice call data from AWS efficiently.

- Optimized data store performance with OS, db instance-level, query-level bottleneck identification and performance tuning.
- Developed 80-100 ETL jobs using Python and TOS DI from various data sources to populate, administer DW and other enterprise data stores.
- Provided 24/7/365 on-call production support; both planned and unplanned . Administered all production and development database upgrades, replication, backups and restores.
- Maintained five-nines production database uptime in synergy with operations, change management, development teams, over entire four year tenure.
- Worked cross-functionally with stakeholders and teams to ensure production data stores and applications were addressing changing requirements and remained stable and available at all times.
- **Tech:** MySQL, MariaDB, Percona, IBM iSeries DB2, Oracle, Google Big Query, MongoDB, Salesforce, Python, SQLAlchemy, AWS EC2, S3, SNS, SQS, Glacier, Java JDK, Talend Open Studio for Data Integration (TOS DI), GNU/Linux (CentOS 6-8 mostly), MacOS.

Wowza Media Systems, Golden, CO
Data Warehouse Architect, DBA 2014 – 2016
- Designed and developed high-performing 4TB enterprise data warehouse for marketing and sales analytics, operational, and billing data marts.
- Designed/developed ETL processes for pulling/pushing data from/to MySQL, MS SQL, Amazon Web Services, flat files, etc. using TOS DI.
- Designed/developed a suite of analytics deliverables for enterprise, marketing, billing, and sales/revenue business intelligence applications.
- Architected/implemented AWS infrastructure. Migrated transactional/analytic MySQL databases and data processes from legacy web hosting provider to AWS. Set up replication tree for high availability and failover capabilities. Tuned, monitored, maintained, and administered. 100% uptime for production databases.
- Refactored 3000 line PERL billing application (exec time 40m) to two-page SQL stmt (exec time 2m).
- **Tech:** MySQL, MariaDB, Talend Open Studio for Data Integration (TOS DI). AWS CLI, VPC, VPN, S3, Glacier, GNU/Linux, OSX.

Alpha Bay, Louisville, CO
Data Integration Engineer / DBA 2010-2011
- Performance-oriented OLTP and OLAP logical, physical schema design.
- Developed near-real time ETL processes using Pentaho kettle, Mule ESB and stored procedures.
- Maintained KTRs flowing on Mule enterprise service bus.
- Created reports for internal and external clients.
- **Tech**: IBM DB2, JasperSoft Server/iReport, Pentaho Data Integration, Mule Enterprise Service Bus on Suse Enterprise Linux 10.

Amplifier (KF), Denver, CO
Database Administrator, Linux Systems Administrator 2009
- DBA for production (5GB), replicated hot backup, development, and test MySQL instances.
- Achieved 100% MySQL production up-time while repairing data and performance tuning.
- Architected operational data store and developed ETL for client-facing analytics webapp.
- Developed, implemented, tested, and deployed EDI web service for high-visibility B2B client interface.
- **Tech**: JasperSoft Server, iReport, MySQL 5.1, SQL/PSM, PERL, PostgreSQL 8, SOAP on Red Hat Enterprise Linux (RHEL) 5, Mac OSX Leopard Server.

Meeting One, Denver, CO
Database Administrator 2008
- Database administrator of production, hot backup, development, and European office MS SQL instances, three MySQL instances, 2 standalone, 1 clustered.
- Achieved 99.9% production database up-time while maintaining and tuning production DBs.
- Developed Jasper reports and exports for clients in finance, product development, marketing, IT.
- **Tech**: Jaspersoft Server, iReport, MS SQL 2000, Sun MySQL 5.0 on MS Windows XP, Sun Solaris 10.

Lexis/Nexis (RBI), Highlands Ranch, CO
Data Warehouse Engineer 2007
- Logical and physical design of Oracle web analytics DW - atomic click-track data for 107 websites.
- Developed ETL code for extracting transactional MS SQL schemata and loading Oracle DW.
- Developed extract of file system info.; loading Oracle DW; analytics to identify anomalous data.

- **Tech**: Bash, Informatica, MS SQL 2005, T-SQL, Oracle 10g, PL/SQL, PERL on GNU/Linux.

Great West, Greenwood Village, CO
Database Developer 2007
- Developed complex Oracle PL/SQL procedures and shell scripts for "generic de-conversion" of 401k plans for assets worth an average of 30 million dollars per month.
- **Tech**: csh, Oracle 9.2 on Solaris.

Whole Foods Market, Boulder, CO
Data Warehouse Architect 2006 – 2007
- Architected data marts for storage of sales and inventory facts and dimensions.
- Developed ETL packages and tuned queries for import of transactional data into DW.
- Developed audit procedures and tables to verify database load accuracy.
- Designed Business Objects universe and created reports for DW.
- **Tech**: Business Objects, Oracle 8, 9i, 10g, PL/SQL on MS Windows XP, Solaris.

Bearing Point, Centennial, CO
Database Software Engineer 2005 – 2006
- Developed and maintained CAD application running against Oracle for a major client. Extensive use of C-Language compilers and debuggers. Low-level diagnostics, disassembly of executables, interpretation of machine code.
- **Tech**: C, C++, gcc, native compilers, gdb, native debuggers, Oracle 7.3.2, Pro*C, OCI on HPUX.

Symphony Media Systems, Centennial, CO
Database Developer/Administrator 2004 – 2005
- Architected Oracle 10g operational data store for customer relationship management (CRM) system.
- Developed ETL extracting PostgreSQL OLTPDB and loading Oracle ODS.
- Developed ETL extracting XML from "Zap2It" TV schedules and loading PostgreSQL RDBMS.
- **Tech**: Bash, C Language, Oracle 10g, PL/SQL, PostgreSQL 8.0.1, PL/pgSQL, XML on RHEL 9.

Rocket Software (ASG), Denver, CO
Senior Database Software Engineer – Server Product Engineering 1998 – 2002
- Developed, maintained, profiled, tuned multi-threaded server code for Safari relational OLAP server and middleware using heterogeneous native DB APIs. Re-factored server database abstraction layer.
- Contributed positively to client relationships and assisted in closure of contracts as lead engineer.
- **Tech:** C/C++ Languages, gcc, native compilers, gdb, native debuggers, IBM DB2, Informix, ISAM/VSAM, MS SQL, ODBC 1.0-3.0, Oracle v7-9i, Progress v7-9, Sybase on AIX, MS Windows NT, OS/400, Solaris, System V Unix, VAX/VMS.

Silvon Software, Westmont, IL
Data Warehouse Engineer 1996 - 1997
- Designed, developed extract/transform/load (ETL) systems (with merge, purge, rollback) for DWs.
- Performed comparative performance benchmarking and tuning of Data Warehouse components.
- Implemented analytical reports using Business Objects and other front ends.
- **Tech**: C Language, Business Objects, DMT Time Machine, MS SQL on MSWin NT.

Data Management Technologies, Northbrook, IL
Programmer, Data Warehouse Engineer 1994 – 1996
- Developed, profiled, tuned native middleware for proprietary data-warehousing SQL RDBMS.
- Implemented comprehensive regression test system for RDBMS, Native API, ODBC API and clients.
- Major clients included Nielsen Market Research, Silvon Software.
- **Tech**: C Language, DMT Time Machine, gcc and native compilers, gdb and native debuggers, Oracle 7, MS SQL, Sybase on AIX, MS Windows NT, Solaris.

DePaul University Computer Labs, Chicago, IL
Academic Computing Consultant / Tutor 1991 – 1993

Oakton Community College, DesPlaines, IL
Academic Computing Manager / Microcomputer Specialist 1988 – 1989
- Supported faculty and student academic computer use.
- Hired, trained, managed, encouraged, empowered 15 employees.
- Purchased, maintained and upgraded hardware, software on 40 workstations, 2 servers.

Education

- [DePaul University](), Chicago, IL, Bachelor of Science in Computer Science. Minor: SQL Relational Database Management Systems. Honors track. Major GPA 3.8/4.0.

Current Self-Directed Professional Development

- Python Pandas, Flask, PyTest, Apache Kafka, Airflow, Spark, AWS Redshift, Snowflake, DynamoDB, Lambda, Glu, CloudFormation, Google Big Query, Data Studio, Looker, dbt, Jenkins, InfluxDB.