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TLDR: Lots of back-end data-related software services

Strong focus on high-quality software engineering.

Interests

- Software Engineering: Java, Python
- Environments: Linux, Docker
- Cloud-related: AWS, GCP, Terraform, Kubernetes
- Data: RDBMS, noSQL, Map-Reduce, Elasticsearch
- Industries: AI, Social, Fintech

Experience

Director of Engineering at Ethic (2022-2023) [ethic.com]

Replaced legacy back-end **Java** services with a decoupled layered architecture, reducing feature turnaround time. Added consolidated **error handling** and automated **integration testing**. Designed and built a flexible user-interaction system where content displayed on UI can be modified and restructured dynamically without requiring code changes. Shattered the monolithic **MYSQL database** instance into multiple instances with multiple schemas. Added **Liquibase** to all db schemas, including **docker**ized execution triggered at deploy-time on **Jenkins**. Built automated db synchronization and migration mechanisms. Improved **ElasticSearch** usage. Mentored other engineers.

Lead Software Engineer at Marqeta (2020-2022) [marqeta.com]

Technical lead on a team building payment card fulfillment software services in **Java**, using **AWS**, **SQL**, **GitHub**, **Agile**, **SoA**. Built multiple software services, libraries, and tools. Architected and designed a microservice-based system to replace legacy batch processes. Mentored other engineers.

Senior Software Engineer at Ancestry (2016-2020) [ancestry.com]

Led a team moving all company data and compute resources into **AWS**. Architected, designed, and built multiple **Java**-based services and tools, around both infrastructure and customer orders. Involved with operations, communication, reporting, monitoring, infrastructure, deployment, and large-scale automation. Used **AWS**, **Java**, **Spring**, **REST**, **MySQL**, **JUnit**, **Docker**, **Kubernetes**, **Git**, **Linux**, **Jenkins**, **Maven**.

Senior Software Engineer at **Qualtrics** (2014-2016) [qualtrics.com]

Built back-end Java services for managing data (**SoA** and **MSA**). Filled role of **principal engineer** on two large **data migration** projects, a data **encryption** feature, and the new back-end **data persistence** layer. Designed and built a highly-available high-use tier-one guaranteed-consistency data location service cluster spanning six datacenters, depended upon by multiple other services, and ultimately the entire company, with 100.0% uptime that lasted for many years. Built automated relocation service for moving complex datasets between db shards and datacenters. Gave multiple presentations and training to the engineering department. Used **Java**, **Spring**, **REST**, **MySQL**, **Postgres**, **jOOQ**, **Liquibase**, **JUnit**, **RabbitMQ**, **Docker**, **Git**, **Linux**, **Jenkins**, **Maven**, **AWS**.

Senior Data Warehouse Engineer at **CJ** (2011-2013) [cj.com]

Built a **Hadoop**-based data warehouse. Used **HBase**, **Avro** and **Storm**. Wrote **Java**-based performance optimizer. Built a self-recovering data marshaling system using **flume**, **sqoop**, **bash**, and **Java**-based map-reduce. Built multi-threaded **ETL** processes in **Java**. Retrofitted portions of legacy **Oracle**-based data warehouse, resulting in 60x performance improvement. Built **data migration** tools.

Senior Software Engineer at **Tynt (**2010-2011) [33across.com]

Designed and built dataflows for multiple **Hadoop** clusters, using **Pig** and **Java**-based **map-reduce**. Wrote an **HBase** application layer. Built Hadoop-optimized tools, including a high-speed URL normalizer, a high-speed key phrase matcher, an IP address geo lookup tool, etc.

Software Engineer at **FamilySearch (**2005-2010) [familysearch.com]

Built back-end Java services for a genealogy platform, with **Java**, **JUnit**, **TestNG**, **maven**, **ant**, **subversion**, **Jersey**, **GWT**, **REST**, and **Oracle**. Conducted a massive data migration of legacy data into the new system. Designed and built a vertical feature for capturing user comments, connecting persistence all the way to the front-end.

Software Engineer, Tech Support (2005 and earlier)

Worked for multiple organizations, used many technologies including:
- Programming languages: Java, PHP, C++, C, Perl, Bash
- Operating Systems: Linux, HP-UX, FreeBSD, Windows, OS/2
- Frameworks & stuff: Jersey, J2EE, Struts, .net
- Databases: Oracle, MYSQL
- Software: Jenkins, maven, ant, svn, tomcat, apache2, CAD, Delmia, ProEngineer

Education

Bachelor of Science in **Computer Science** from BYU. Worked for the Computer Science department (Performance Evaluation Laboratory) as a research assistant. Worked as an assistant to the professor teaching the Computer Architecture course.