

Message received in UTF-8 encoding: UTF-8 (Unicode)
010010000110100101
1100100110010100
100000010011010
1100011010010
110110000101
1110010010
000000111
0100010
110100
1010
01

McKay Salisbury

Mobile: (801)358-1693

E-mail: resume@mckaysalisbury.com
<http://files.mckaysalisbury.com/Resume.pdf>

Work Summary

I have been working as a software architect, software engineer, and programmer professionally for over 30 years. I have over 20 years of information technology leadership experience in multiple roles, which includes over 15 years leading agile engineering activities. I have substantial experience in high availability and high reliability systems. I have extensive math and algorithm development experience. My database skills are extensive and include, information architecture, system data flow, database modeling and design, query creation and optimization, and DBMS theory.

Goals

Increase the quality of my craft and help others do the same, while helping make a difference in people's lives.

Recent Experience

Kiavi (LendingHome)

Staff Software Engineer / Tech Lead, Remote, April 2021 – present. Kiavi is a FinTech company focusing on originating and servicing commercial loans for residential properties.

My primary efforts have been involved with designing, implementing, and assisting others with using a new system-wide authorization system. This new system is designed so that the vast majority of requests have zero network latency for request validation.

I have also been heavily involved in the following projects:

- ❖ Architectural guild – Reviewing of and mentoring on architectural proposals
- ❖ Postmortem process – Evaluating serious production outages to reduce frequency
- ❖ Compliance auditing – Assisting with audits for ITGC and Sarbanes-Oxley compliance
- ❖ Payments processing – Maintaining and improving code for servicing loan payments from borrowers to investors
- ❖ Address canonicalization and normalization – Designing and building a new vendor integration

Technical skills used include

- ❖ Ruby on Rails
- ❖ Open Policy Agent / Rego
- ❖ TypeScript
- ❖ Kotlin
- ❖ Postgres
- ❖ AWS (heavy MemoryDB, and S3)
- ❖ JWT
- ❖ JWKS

Dave Inc.

Staff Engineer, Los Angeles, California, November 2019 – March 2021. Dave is a FinTech company with the goal of providing banking services to improve the financial lives of its customers.

I helped Dave scale and expand its existing services. Mostly this involved the design and implementation of newer system architecture involving smaller event-driven services migrating away from the initial startup architecture, to improve scalability, and ease of future development. I developed several internal libraries used by multiple repositories in the company to facilitate these efforts. While I was there, the number of users Dave had was growing about 30% per year with about 10 million users at the end.

I also guided the company on systems architecture, information architecture, data modeling, and the documentation thereof, with a special emphasis placed on self-updating documentation.

Skills used include

- ❖ TypeScript
- ❖ Node
- ❖ Graph theory
- ❖ GraphViz / DOT files
- ❖ pointillism.io
- ❖ GitHub (including Actions and Packages)
- ❖ Datadog
- ❖ Google Cloud Platform (including Spanner, Tasks, and Pub/Sub)

Hulu (Disney Streaming Services)

Senior Software Developer, Santa Monica, California, May 2016 – November 2019. Hulu is a subscription video service.

I helped design, build, and maintain services that process and store view history information for more than 25 million user accounts. These services need to handle very high availability, reliability, request rates, and security.

As Hulu built its live TV subscription service, I architected, designed, and developed on the content metadata platform. That platform stores video and live-TV metadata pertaining to content information, and frequently-changing availability restrictions and rights.

I worked with media content providers and other metadata aggregators to translate metadata from various formats into a common internal API for consumption by other teams at Hulu.

I was heavily involved in internal knowledge sharing. I created a new internal convention format for sharing recent learning across teams.

I was also instrumental in Hulu's compliance with the California Consumer Protection Act.

My work has me named on two patents that have been issued, and several more patent applications that are currently pending.

Skills used include

- ❖ Python
- ❖ Java
- ❖ Django
- ❖ Git / GitHub
- ❖ Angular
- ❖ Bootstrap
- ❖ REST
- ❖ SCTE / ESNI
- ❖ Graphviz
- ❖ Set Theory
- ❖ MySQL
- ❖ Cassandra
- ❖ Redis
- ❖ ElastiCache
- ❖ JSON
- ❖ DynamoDB
- ❖ MongoDB
- ❖ ElasticSearch
- ❖ AWS
- ❖ Cloud migration

Pyramid Systems, Inc.

Software Architect, Arlington, Virginia, May 2013 – February 2016. Pyramid Systems provides contracting service, mostly on United States government contracts.

The majority of my work was on the Federal Deposit Insurance Company (FDIC) Examination Tool Suite (ETS) project as a software architect. ETS is used by bank examiners to evaluate banks during their reviews of banks by the FDIC and several other state and federal government entities.

I designed and led a team, using agile methodologies, in the implementation activities of a specialized distributed version control tracking and approval system for keeping track of and approving changes to documents between several examiners. The system is modeled after current distributed source control systems (like Git and Mercurial), using an acyclic directed graph to keep track of changes between versions.

As an FDIC application, security and privacy of data are of the utmost concern. I held a public trust clearance for this position. Also, the expected lifespan of the application is expected to be decades, so quality is critical, which includes heavy testing paradigms. Skills used include

- ❖ Graph Theory
- ❖ Distributed Version Control
- ❖ C# 6 / .NET 4.6
- ❖ LINQ
- ❖ Entity Framework
- ❖ Systems Architecture
- ❖ WPF
- ❖ XAML
- ❖ Database Design
- ❖ SQL Server

I also worked on a purchase agreement for the General Services Administration. Skills used include

- ❖ TypeScript
- ❖ Bootstrap
- ❖ Node.js
- ❖ Express
- ❖ AngularJS

Additionally, I helped Pyramid win a contract vehicle for the Census Bureau. Skills used include

- ❖ Statistics
- ❖ Machine Learning

TSYS (Total System Services, Inc)

Senior Software Developer, Lehi, Utah, February 2008 – May 2013. TSYS is a credit card processor on the Fortune 1000 list. I was in charge of designing, building, and maintaining various parts of their credit card processing systems focusing on small businesses. Due to the financial data in their systems, security is essential. Skills used include:

- ❖ C# 5 / .NET 4.5
- ❖ SQL Server 2008
- ❖ N-tier
- ❖ Service-oriented architecture
- ❖ PCI DSS
- ❖ Android (Java)
- ❖ USB
- ❖ Windows Phone 7
- ❖ Reflection & Generics
- ❖ WCF services & clients
- ❖ WPF, Silverlight, ASP.NET, & Win forms
- ❖ Windows Services
- ❖ LINQ

Education and Training

Brigham Young University

- ❖ Graduated with a Bachelor of Science in Computer Science
- ❖ Emphases in Databases and Mathematics

Formal Training I have attended formal external training in the following technologies

- ❖ Certified ScrumMaster® - Scrum Alliance (Certification valid 2015-2019)
- ❖ DynamoDB (Professional training classes)
- ❖ MongoDB (Professional training classes)
- ❖ F# (Professional training class)
- ❖ Government Contracts (Professional training classes)
- ❖ Windows Phone (Professional training classes and //build)
- ❖ WinRT (/build)

Awards & Activities

Other Relevant Information

- | | |
|--|--------------------------------------|
| ❖ Eagle Scout | ❖ Board games, video games, & TTRPGs |
| ❖ Public Trust clearance (inactive) | ❖ Mars Society |
| ❖ 5 US Patents Granted (+ international patents) | ❖ Literature |
| ❖ Other Pending: (1 US and multiple international) | ❖ Music |
| | ❖ Comic books |

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