

Aaron Schrab

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<https://schrab.com/aaron/resume/>

Summary

Over twenty years of experience building web applications and backend systems, with deep expertise in API design, Ruby on Rails, and deployment automation. I have worked across the full stack from database schema design to front-end UI and can quickly get productive in new languages, frameworks, and platforms.

Strong track record designing and delivering REST and GraphQL APIs, automating infrastructure with Docker, AWS (Lambda, API Gateway, CloudFormation, ECS), and CI/CD pipelines, and optimizing database performance across PostgreSQL, MySQL, and MongoDB. Experienced with both greenfield development and incrementally modernizing legacy systems.

I work effectively independently and as part of a team. I enjoy mentoring junior developers and contributing to code review culture, and I have a history of open-source contributions across a wide-variety of projects.

Exceptional attention to detail with a strong record of diagnosing and resolving difficult bugs in complex, distributed systems.

Skills

Programming Languages: Ruby, TypeScript, JavaScript, Java, Python, SQL, Perl, Bourne shell, C, C++, awk

Frameworks & Libraries: Ruby on Rails, React, TanStack Start, Node.js, Express.js, GraphQL, Apollo, Angular, Catalyst, ExtJS

Databases: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch

Cloud & Infrastructure: Docker, AWS Lambda, AWS API Gateway, AWS CloudFormation, AWS ECS, Convex, Clerk, Vercel

Development Tools: git, GitHub, Jenkins, Webpack, Postman, Jira, Codex, Subversion, Apache web server, make

Links

✉ schrab.com/aaron

✉ github.com/aschrab

✉ linkedin.com/in/aaronschrab

✉ stackoverflow.com/users/1507392/qqx

Experience

Files.com

Backend Engineer

February 2024 – January 2025

Implemented new features, worked on troubleshooting, diagnosed bugs, and provided fixes within the Files.com API. This is a Ruby-on-Rails based project using Amazon Aurora MySQL, Redis, and Elasticsearch for storing and retrieving file metadata. Features that I developed included support for a new read-only administrator role, and the ability to automate retrieval and saving of HTTP resources.

Worked on generation of SDKs and associated documentation for the Files.com service. One major contribution I made to this was to generate most of the content for README files from content written for the developer documentation site.

Worked to convert data stored in Redis from using JSON to MessagePack, using a combination of Ruby, Java, and Lua.

NetApp
API Engineer

Morrisville, NC
November 2015 – April 2023

Worked to move business rules from monolithic, client-side procedures into more structured code in API server developed with Ruby on Rails.

Mentored team members who were new to Ruby and Ruby on Rails.

Took part in overseeing the development of the beginnings of a new UI developed with Angular.

Converted UI build system from grunt to webpack, eliminating the need for bower which was not supported in the target environment.

Developed API for sending push notifications to mobile devices, using Amazon SNS.

Clarified, classified, and prioritized Jira issues.

Wrote Hive queries to gather data from a Hadoop cluster. Wrote a Python script to monitor NFS file store for updates and load this data into a MongoDB database. Developed APIs to serve the data using Node.js and Express. Developed UIs to display the data using Angular.

Deployed services to run in Docker containers on Amazon EC2.

Developed serverless APIs to operate as AWS Lambdas via the AWS API Gateway, using both Node.js and Java. Automated deployment of these using Jenkins and AWS CloudFormation.

Documented APIs with OpenAPI specifications, and deployed Swagger UI for viewing that documentation.

Created a React-based app for testing OAuth login process.

Worked on GraphQL API server developed in Node.js using the Apollo framework to work with data stored in a MongoDB Atlas database as well as working with other backend-APIs. This was then packaged in a Docker container and deployed to AWS Elastic Container Service.

Sunbird Software
Senior Software Engineer

Raleigh, NC
May 2015 – October 2015

Worked on the PowerIQ web interface which uses Ruby on Rails to present data from a PostgreSQL database to manage Power Distribution Units and monitor the environment in data centers.

Optimized queries to the PostgreSQL database in order to decrease the amount of time users need to wait to see data.

Built a Rails engine to serve JSON data and JavaScript code to generate psychrometric charts as SVG, replacing a legacy Flash-based solution.

Wrote database migration rules using Liquibase.

Reviewed GitHub pull requests from other team members.

NetApp
Tools Developer

Morrisville, NC
September 2013 – February 2015

Development on the internal issue-tracking system to convert it to using an Oracle database via a JSON API implemented with Ruby on Rails.

Worked on generating testable API documentation to ensure that the described API was accurate and would remain so as additional development was done.

Helped in design of database schema.

Developed a Perl library to minimize changes needed for legacy client applications to work with the new storage system.

Participated in code review process for changes by other team members to improve code quality.

Developed tools to compare data in Oracle database against legacy storage to check for bugs in the data conversion process.

Developed Oracle PL/SQL stored procedures to assist in writing queries to replicate functionality from legacy system.

Assisted users in writing SQL queries based on their described requirements.

Corvisa

Founding Engineer

Milwaukee, WI

September 2009 – May 2012

Full-stack development on the initial version of a web-based application for mortgage companies using Perl's Catalyst MVC framework and PostgreSQL to run the backend which provided a REST API for a browser-based user interface implemented with the ExtJS toolkit. The initial development to assist with regulatory compliance in dealing with appraisals was done largely by myself. As the scope of the product grew to handle more functionality the size of the team grew to more than 20 developers.

Developed Perl-based tools for keeping database schema and base data synchronized with changes kept in a version control system.

Developed a system for documenting REST-API endpoints which generated PDF documents that gave examples of data structures using either XML or JSON syntax from a common XML source format.

Enhanced WireShark's support for dissecting AMQP messages and added support for binding a queue to an exchange based on message headers to the Net::AMQP::RabbitMQ perl module.

Managed the migration of the source code from subversion to git.

Brevient Technologies

Senior Software Architect

Milwaukee, WI

January 2007 – September 2009

Developed a web-based system for creating marketing messages and distributing them via email, RSS, and website applets using Perl's Catalyst MVC framework along with PostgreSQL.

Used Perl to implement a system for billing thousands of VoIP calls per hour along with other products, generating PDF invoices that could contain more than 10,000 pages each.

Maintained the Jyngle.com site using Perl's Catalyst framework, which allowed users to send voice and/or text messages to large groups of subscribers at a time.

Enforcer Group, Inc.

Senior Developer

West Allis, WI

November 2002 – December 2006

Led the design and development of web-based records management, mugshot, and computer aided dispatch (911) systems for public safety agencies using a combination of Ruby, PostgreSQL, JavaScript, and Java. Worked on data modeling for relational database to ease migration from the previous hierarchical system while enhancing the performance, flexibility, and consistency..

Developed an embedded Linux platform to be hosted at client sites to run portions of this system and provide VPN connections to the primary hosting site.

Responsible for setting up and administering servers for the previously mentioned systems as well as the company's internal servers.

Configured an Asterisk system to handle the company's telephone system, using a combination of analog phone lines along with both hardware and software VoIP phones.

CoreComm

Systems Administrator

New Berlin, WI

May 1996 – March 2002

Administered legacy ExecPC mail systems with over 100,000 client accounts.

Managed internal and customer mailing lists.

Setup and maintained Unix (Linux, FreeBSD, and Solaris) servers providing a variety of services.

Wrote programs in Perl, Bourne shell, and C to automate administration and provide new services.

Assisted technical support and customer service personnel in fixing customer problems.

Education

Marquette University

Milwaukee, WI

September 1992 – May 1996

Studied Electrical and Computer Engineering, then changed my major to Computer Science.

Activities

I am working on a web-based application to track personal finances, using Convex as the backend and the TanStack Start framework for React as the frontend. The UI for this project is built and hosted with Vercel, and it uses Clerk for authentication. I have mostly been doing agentic coding on this project using T3 Code and Codex.

I contributed code to implement support for pre-push hooks in git.

I have contributed several enhancements to UltiSnips, a Python-based plugin for Vim; including a complete refactoring of the test system.

I contributed the recording history module for the TivoWeb project, a web-based interface for interacting with TiVo DVRs implemented in TCL.

I have contributed patches to numerous other projects.

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