Craig Israel
Staff/Principal Software Engineer

Craig Israel

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Skills

from most to least experience

Ruby	Kubernetes
Rails	MySQL
Postgresql	GraphQL
NodeJS/Typescript	DynamoDB
Redis	Python
Elasticsearch	Flask
Docker	Bash scripting
AWS (EC2, RDS, SQS, SNS, SES, S3, ECR, Lambda)	GCP
	Golang
NestJS	Terraform
React/Redux	MongoDB
Kafka	C#
RabbitMQ	Memcached

Experience

TheKey / Backend Tech Lead
April 2022 - Present

Provide technical leadership and hands-on development for the api platform.

Highlights:

- Created an architectural roadmap to improve quality, reliability and team velocity. Decisions involved choosing a monolith or microservices, choosing the language and framework, and choosing GraphQL or REST apis. The process also involved optimizing the CI/CD pipeline and identifying a practical distribution of work to leverage vendor relationships
- Provided a migration strategy for moving to the updated architecture without incurring downtime and with no impact to ongoing feature development.
- Identified and led implementation of operational improvements including error notification and handling, logging, and tracing

Square / Tech Lead, Senior Software Engineer
February 2021 - April 2022

Provided technical leadership and hands-on development for Directory and Invoices teams.

Highlights:

- Performed architectural reviews for large-scale initiatives including bulk background job processing, public and private API definitions, performance optimizations, and cross-team microservice collaborations.
- Implemented circuit breaker pattern in Golang service to provide improved availability when some database shards were unavailable
- Mentored team on Rails/ActiveRecord best practices for the launch of a new service, large-scale architectural decisions including introducing Kafka and DynamoDB, and cross-team collaborations.
- Introduced configurable Ruby Kafka consumer to easily allow applications to consume Kafka feeds
- Redesigned PDF generation code to follow a component-based model to improve testability and to allow for easily implementing new features and variants of the PDF.

TaskRabbit / Staff Engineer

April 2019 - January 2021

Performed various full-stack engineering tasks, including feature development, code reviews, troubleshooting, and performance optimizations.

Highlights:

- Architect and engineering lead for conversion of a home-grown chat solution to a 3rd party vendor. Integrated and migrated a solution in-place with no downtime improving reliability and performance of application chat.
- Technical lead of cross-team effort to introduce and integrate Segment CDP platform which improved flexibility and allowed for implementation of third party integrations with minimal engineering effort.
- Founding member of the Architectural Working Group formed to discuss and advise on architectural vision and decision-making for the platform.
- Introduced AWS Lambda proof-of-concept to route third-party webhooks in non-production environments to improve developer efficiency and learn about how the technology could be leveraged in the organization.
- Worked as part of a team to internationalize the IKEA product integration for launch in France, Germany and Spain.

Proteoworker / Founder/CTO

May 2016 - October 2019, Nashville, TN / Remote

Was responsible for development and support of backend data processing of a high-volume data analysis pipeline. Built UX-focused front-end with React/Redux. Application is specifically designed for dynamic scaling with RabbitMQ workers, Kubernetes cluster scaling and AWS. Responsibilities also included building and maintaining all Kubernetes infrastructure.

Highlights:

- Designed and built a scalable architecture with RabbitMQ to allow independent scaling at each step of the data processing

pipeline. Applied deep knowledge of RabbitMQ design patterns and infrastructure configuration.

- Built monitoring app that scales pods in the Kubernetes cluster based on Rabbit queue depth to optimize AWS costs and end-user performance.
- Extensive Postgresql optimization of query plans and postgres.conf in RDS environment for database.
- Built a SQL Query Builder that dynamically builds Postgres queries based on user requested parameters. The queries are designed to maximize use of database indices and limit data retrieved to only the data requested by the user while also being secure and not directly allowing user-entered input.

Valify (formerly Lucro) / Engineering Lead
August 2016 - February 2019, Nashville, TN / Remote

Led engineering team. Provided technical guidance to company leadership. Established processes to allow for a fast-moving and high-quality software development team capable of responding to a startup's rapidly changing needs.

Highlights:

- Identified and solved performance issues with Rails and Postgres code to reach a standard of P99 web request performance less than 100ms. Optimizations included postgresql query plan changes, ActiveRecord eager loading techniques, serialization improvements, and limiting object creation. Added a Redis cache to prepare for further optimizations.
- Proposed and built a web-scraping tool to allow users the ability to populate the application product catalog on-demand instead of relying on manual discovery and input. This allowed the catalog to double in size and removed the need to hire temporary help manually researching web content. This was eventually turned into a revenue-generating standalone product.
- Defined the architecture and lead development of an automated regression testing tool to maintain high quality output after QA resources were no longer available. Test suite is automatically run by Jenkins in a Kubernetes environment that is built dynamically for each test run to ensure tests are not impacted by side-effects.
- Led development effort to migrate the application to a React/Redux architecture. Worked with the other senior developers to establish patterns for the new React code being built. Designed a new JSON/REST API that is consumed by the React code and also will be used by external integration partners. API includes features such as standardized serialization patterns, conditional get, versioning and caching of JSON responses in Redis.

Tiny Ninjas Consulting / Software Consultant

Provided independent software consulting services for numerous clients covering Architect, Team Lead and Senior Developer responsibilities.

Groups360
October 2015 - May 2016, Nashville, TN / Remote

Replaced a legacy application that had issues with accuracy, speed and maintainability and provided a corporate platform to build future

applications on. The primary feature was searching and the new application improved the worst case performance speed from 30 minutes to 10 seconds. User confidence also went up because the results were considered to be more accurate. The new platform is now being used by 3 different applications.

Highlights:

- Designed and implemented a microservices architecture to support Angular front-end applications that used a custom OAuth2 provider for authentication and a JSON Web
- Established caching patterns using Memcached, Postgres and ETags to keep P95 for inter-service requests below 5ms.

Elpis

January 2015 - May 2016, Laguna Beach, CA / Remote

Helped an early stage startup by establishing team practices including Continuous Integration, RSpec/Jasmine testing patterns, RESTful apis, and one-touch deployment in order to scale team beyond the founders. Develop features to prepare the application for non-pilot customers.

Highlights:

- Built a modular framework with Rails/JS for user dashboard "widgets". This allowed for the rapid development of new widgets and established patterns so that all widgets would be implemented in a similar style.
- Built an object-oriented JS chart library that abstracted Highcharts to make it easy to add dynamic charts to the application quickly. It included a number of components that provided parameters for the chart data queries and would refresh all relevant components using the Observer pattern when the user changed parameters in the UI.

Onlife Health

January 2012 - January 2015, Nashville, TN/Remote

Defined architecture and implemented the conversion of an existing .net member portal solution targeting small custom clients to a Ruby on Rails platform targeting large health plans with configuration driven by a product team. Co-lead for the team of 12 developers including on-site, vendor and remote members across three organizations.

Highlights:

- Built a javascript library for taking configuration-defined surveys. The library consumed a REST API and supports a cross-domain implementation, all modern browsers and Internet Explorer 8+.
- Built a MongoDB based survey engine that allowed for sophisticated custom workflow logic and numerous types of

questions/responses. Provided a REST API for consumption by the JS client and other Ruby services.
- Wrote an object-oriented library for building daemons for file-watching and monitoring RabbitMQ queues and released as a gem. (https://rubygems.org/gems/daemon_objects)
- Co-wrote a library to manage attributes that need historical tracking. It uses a MongoDB-backed web service, but is written to support implementations in other persistence mechanisms. (https://rubygems.org/gems/plyushkin)

Healthways / Architect/Team Lead

June 2009 - January 2012, Nashville, TN

Design scalable pilot applications that are stable and quick to market. Make technology decisions to support that goal. Mentor senior development resources on new technologies that were implemented.

Highlights:
- Led conversion of the team from .net to Ruby to allow for faster implementation of pilot apps
- Used Redis to provide live statistics on the home page of user activity
- Designed an architecture for a .net solution using principles of CQRS which made implementing new features simple and easy to unit test.

Sommet Group / Consultant (Compuware)

October 2008 - June 2009, Nashville, TN

Link2Gov / Metavante / Consultant (Vaco)

April 2008 - October 2008, Nashville, TN

Landmark Digital / Sr. Development Consultant (Everest Technologies)

October 2007 - April 2008, Nashville, TN

Goldleaf Financial Solutions / Development Team Lead

August 2006 - October 2007, Nashville, TN

HCA (Hospital Corporation of America) / Senior Developer/ Architect Consultant (Compuware)

March 2005 - August 2006, Nashville, TN

Investment Scorecard / Senior Developer

October 2000 - March 2005, Nashville, TN

BT Services / Metlife / Software Developer

January 1995 - October 2000, Nashville, TN

Open Source

DaemonObjects
https://github.com/craigisrael/daemon_objects

A library that helps write daemons in ruby with an object-oriented approach.

Plyushkin
https://github.com/starkin/plyushkin

ActiveRecord extensions for tracking and accessing historical data changes..

Education

Middle Tenn State University / Bachelors of Science - Recording Industry Management

Graduated cum laude December 1994, Murfreesboro, TN