

# Ian Perkins

SENIOR SOFTWARE ENGINEER

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## Education

### University of Arkansas - Fayetteville

B.S. IN COMPUTER SCIENCE

- Minor in mathematics and graduated with honors.

Fayetteville, AR, USA

Aug. 2014 - May 2018

## Work Experience

### Fountain

SENIOR SOFTWARE ENGINEER

- Improved CI/CD (CircleCI and Github Actions) workflow speed by 66% and 50% for the two most frequently changed and tested repositories.
- Replicated our AWS cloud infrastructure in Azure using Terraform to ensure a resilient and fault tolerant multi-cloud application.
- Led an implementation of a centralized and secured environment variable management service (Doppler) for all deployed services/applications.
- Implemented a runtime analysis tool for unused code that led to the removal of close to 100,000 LOC from our primary application repository.

San Francisco, CA, USA

Sept. 2021 - Jan. 2023

### Cerner

ASSOCIATE SENIOR SOFTWARE ENGINEER

- Developed and maintained an organization-wide Ruby on Rails API platform that handled 365 million requests per week for hospitals and clinics worldwide, aggregated across multiple geographical and logical zones.
- Designed and developed a Ruby on Rails rate limiting service to protect the platform and the services behind it due to a high volume of requests, increasing overall availability across the platform.
- Improved monitoring and observability to our web platform by creating a Lua library to communicate telemetry data from the platform to New Relic for analysis and alerts on platform health.
- Answer questions and drive discussion regarding adherence to platform standards like the OpenAPI Specification, Ruby on Rails best practices, and applicable RFCs.
- Mentor new engineers and evaluate whether they are prepared for their permanent team assignment.
- Created a frontend UI in React.js for internal consumers to easily manage how they rate limit their individual APIs.

Kansas City, MO, USA

Feb. 2021 - Sept. 2021

### Cerner

SOFTWARE ENGINEER

- Led initiative to decouple the weekly platform deployment testing from the functional validation, integration testing, and prototyping of our contributors' APIs via a Jenkins job and loadbalancer configuration, saving thousands of engineering hours to date.
- Implemented a distroless Docker image that eliminated hundreds of CVEs from unused system packages provided by default in the OS image.
- Transitioned from a WEBrick server to the Openresty web platform with an NGINX web server in order to remove a bottleneck for high volume POST endpoints and streaming resources (upload and download).
- Identified and managed Service Level Objectives (SLOs) and Service Level Indicators (SLIs) to set a baseline expectation for all APIs incorporated into our platform.
- Monitor, support, and resolve metrics alerts from various telemetry sources, scheduled tenant migrations, and incidents related to the platform.
- Maintain and curate platform and services' documentation for external consumers.
- Simplified and centralized our API Developer Guide and platform contribution process to eliminate unnecessary paperwork.
- Developed New Relic dashboard and alert templates using Terraform modules to improve monitoring scalability when deploying to new cloud region zones.
- Responsible for platform health, support, and incident response while on-call and as escalation manager.

Kansas City, MO, USA

Aug. 2018 - Feb. 2021

## Publications

### Computational Complexity of Determining the Rigidity of FTAM Assemblies

Co-Author

- Discusses the property of rigidity in folding tile assembly models (FTAM) by devising a simple definition of rigidity using a 3SAT reduction to determine its complexity leading to a co-NP-complete result.

ScholarWorks @ UARK

Aug. 2017 - May 2018