

# Ryan Pape

in rynbp  rynbp

## SKILLS

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**Technologies:** Kafka, React, Storm, Hive, Hadoop, HDFS, Presto, Maven, Gradle, InfluxDB, Aerospike, Git, RabbitMQ, SQL Server

**Languages:** Java, Kotlin, JavaScript, PHP, Python, CSS/SASS, HTML, SQL

## EXPERIENCE

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### Wayfair

Boston, MA

Software Engineer II

Jul 2017 - Present

- *Mentor:* Onboarded 2 new teammates. Provided feedback in code reviews for 8 new hires and held office hours for larger cohort of 26 junior developers hired through Wayfair Labs.
- *Code Reviewer:* Reviewed Java code changes by teammates. Provided first-pass feedback on tracking code changes in JavaScript & PHP.
- *On-Call:* Debugged issues with 16 different Storm and Spark applications in on-premise and Google Cloud Platform datacenters as a part of weekly, 24/7 on-call rotations. Monitored recovery of applications after datacenter-wide outages, maintenance, and tests.
- *Operational Tracking Events:* Created or updated 33 tracking event Java classes and their integrations in PHP, JavaScript, and SQL Server as a part of agile workflow. Scoped project roadmap to improve generation of Java classes from YAML config file that decreased engineering time necessary for code changes by 50%.
- *Android Tracking SDK:* Designing tracking SDK written in Kotlin to replace legacy framework used to track customer interactions on Android mobile app. Gathered requirements from stakeholders on Android team. Currently working towards a beta release.
- *MirrorMaker Lag Investigation:* Investigated lag in realtime data replication across datacenters by Kafka MirrorMaker. Concluded that large messages sizes were a possible cause and advocated for a POC script to analyze individual message sizes.
- *Infrastructure Upgrades:* Monitored applications during upgrades on distributed system dependencies such as Spark, RabbitMQ, and more.
- *Kafka Migration:* Migrated messages that power realtime notifications to a new Kafka topic written from a PHP client.
- *InfluxDB Monitoring Conversion:* Migrated Datadog monitors, on-call notifications, and dashboards from Graphite to InfluxDB. Planned reorganization of error logging and Influx metrics currently in progress by teammate.
- *In-View Tracking:* Designed reusable React component to track items viewed by users. Strategically logged data to REST endpoint to maximize data integrity while minimizing requests made to maintain site performance.
- *Aerospike REST Service:* Created REST endpoint in Kubernetes Java service that wrote records to Aerospike from PHP client.
- *AMP Tracking:* Parsed web analytics data from Google AMP pages and logged it to internal tracking platform.
- *Timestamp Correction:* Implemented algorithm to correct or drop data with old timestamps tracked from mobile apps recently connected to the Internet after an extended period of time offline.
- *Hive UDF:* Wrote a user-defined function in Java to convert longs to timestamp strings in Hive as well as one that converts lists of longs to lists of timestamps, which utilizes Hive object inspectors.
- *Kafka Command Line Consumer:* Added option to internal command line tool to export Avro-serialized Kafka messages to a JSON array of objects written to a file.
- *Doc Generation:* Led project to generate MkDocs markdown documentation from YAML config file. Wrote script to generate release notes from Git log.
- *QA Application Architecture:* Proposed architecture for redesigned QA tool that would display tracking events for a device or customer in realtime using React, PHP, Java, Aerospike, Storm, RabbitMQ, Kafka, and Kafka Connect.

- *Storm Topology Scaling*: Helped teammate identify Storm topology latency bottleneck. Reviewed code changes to split topology into more spouts & bolts and give the bottleneck bolt more resources.
- *Frontend Tracking API*: Gathered technical requirements from Frontend engineers working on Extranet site and planned work to enhance React components used on web store for use on Extranet. Reviewed teammate's code changes to make the enhancements.
- *Kafka Topic Migration*: Migrated high volume data from Recommendation Service to new Kafka topic in multiple datacenters in order to eliminate unnecessary load on realtime Storm topologies.
- *Device Fingerprinting*: Used industry research to determine hashes of HTML5 elements and browser settings that may uniquely identify devices without cookies in pilot. Strategically prioritized calculation of hashes to maximize uniqueness of hash identifiers while throttling hash calculation to maintain site performance.
- *PHP Session Bug*: Launched initial investigation into race condition bug where mobile app advertiser identifiers were dropped from PHP sessions. Eliminated possibility that identifiers were never sent from mobile app with analytics queries and mobile app testing. Assisted teammate in brainstorming a new tracking solution.

## VOLUNTEERISM

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### City Year Boston

Boston, MA

Corps Member at Trotter K-8

Aug 2016 - Jun 2017

- *8th Grade Academic & Attendance Coach*: Helped 3 students increase their English Language Arts grades from C's & B's to A's. Helped 1 student increase her attendance by 21%.

### AmeriCorps NCCC

Sacramento, CA

Corps Member

Oct 2015 - Jul 2016

- *BLM Trail Crew*: Lived and worked with 7 teammates to build & maintain 24 miles of trails in public lands.

## EDUCATION

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### University of Iowa

Iowa City, IA

GPA: 3.91

Aug 2012 - May 2015

- Informatics: Human-Computer Interaction, B.A.
- Psychology, Minor
- Computer Science, Minor
- Writing, Certificate (21 s.h.)