

Andrew R. Mains

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EDUCATION

UC Berkeley

B.A. Computer Science & Cognitive Science, GPA: 3.75

Berkeley, CA

December, 2012

SKILLS AND TECHNOLOGIES

Languages: Java, Go, Python, Scala, C/C++, Ruby, Clojure, SQL, Scheme

Technologies: Hadoop, Hive, HBase, HCatalog, Saltstack, ANTLR, Bison/Flex, MySQL, Django, Jersey, Rails

EXPERIENCE

Uber

Senior Engineer, Configuration Platform

Engineer II, Configuration Platform

San Francisco, CA

March 2018-present

January 2016-March 2018

Flipr: UCS Migration (Go)

- Designed and implemented a seamless migration path to move Flipr's configuration pushing system to a revamped backend.
- Wrote the specification and worked with a junior engineer to implement ucs-monitor, which verified the integrity of the migration.

Flipr: Incremental Rollout (Python)

- Designed and implemented a system to allow users to roll out their configuration changes gradually.
- Wrote all of the backend API's for the rollout engine, including rollout state management and support for flexible rollout strategies.
- Provided weekly status updates to stakeholders, coordinating the project with a broader initiative to prevent global changes at Uber.

Upsight (formerly Kontagent)

Senior Software Engineer, Data Team

Software Engineer, Data Team

San Francisco, CA

August 2014-December 2015

February 2013-August 2014

Tesseract: OLAP over HBase (Java, HBase, Jersey)

- Implemented a query system for multidimensional data on top of HBase with support for rollups, grouping and filtering
- Implemented an HBase coprocessor to distribute query execution across regionservers
- Architected and implemented a REST API on top of the underlying query layer

Datamine Hardening (Django, Hive, HCatalog)

- Led a team of 4 in redesigning and implementing an asynchronous REST API for Kontagent's multitenant hive service, focusing on reliability
- Patched Apache's WebHCat to support asynchronous submission of jobs to Hadoop's JobTracker

Oracle

Software Engineering Intern

Redwood Shores, CA

Summer 2012

SAS to R Compiler (ANTLR, Java)

- Architected and implemented a translator from SAS to R from the ground up
 - Created a static analyzer for SAS in order to generate optimized R code.
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OPEN SOURCE CONTRIBUTIONS

Mapreduce over multiple HBase snapshots (HBASE-13356, HBase 1.2.0)

- Implemented the ability to run mapreduce jobs over multiple scans on HBase snapshots
- Allowed for more fine grained push down of predicates to HBase, and thus better performance

Hive predicate pushdown to multiple HBase scans (HIVE-7805)

- Modified Hive's HBase integration to push query predicates down to multiple scans
- Significantly reduced the amount of data scanned for hive queries on Upsight's raw data store