Andrew R. Mains

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EDUCATION

UC Berkeley   Berkeley, CA

B.A. Computer Science & Cognitive Science, GPA: 3.75   December, 2012

SKILLS AND TECHNOLOGIES

Languages: Java, Python, Scala, C/C++, Ruby, Clojure, SQL, Scheme, R
Technologies: Hadoop, Hive, HBase, HCatalog, Saltstack, ANTLR, Bison/Flex, MySQL, Django, Jersey, Rails

EXPERIENCE

Uber   San Francisco, CA

Software Engineer II, Marketplace Continuity   January 2016-present

Flipr: Dynamic Configuration
- Fullstack development on Uber's dynamic configuration service

Upsight (formerly Kontagent)   San Francisco, CA

Senior Software Engineer, Data Team   August 2014-December 2015

Software Engineer, Data Team   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   Redwood Shores, CA

Software Engineering Intern   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.

Kontagent   San Francisco, CA

Software Engineering Intern   Summer 2011

Hive Interface (Python, Hive)
- Wrote the server side of a REST interface for Hive, using the Thrift API provided by Cloudera's Beeswax
- Wrote a UDF to calculate session times for users in games

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

SELECTED COURSES

CS162: Operating Systems	CS164: Compilers	CS170: Algorithms
CS188: Artificial Intelligence	CS186: Databases	CS169: Software Engineering