

WORK EXPERIENCE

Apple Inc. (iCloud) - San Francisco, CA

2016 - Present

Software Engineer

<http://apple.com/>

- Designed key aspects of the backing storage engine that enables iCloud to scale to hundreds of millions of users each month.
- Architected the new multi-tenant online compaction system which provides higher throughput guarantees and reliability by distributing workloads over backend resources evenly.
- Engineered a proactive solution to data loss prevention. Led to the discovery of several undiscovered, subtle bugs in the underlying frameworks and data store.
- Vastly reduced database load by introducing a job framework that allows numerous scheduled jobs share the same pooled resources concurrently.
- Languages / tools used: Scala, Java, Cassandra, MapReduce Frameworks.

Cloudera - San Francisco, CA

Summer 2015

Software Engineer Intern

<http://cloudera.com/>

- Implemented network performance increases in Apache Spark that reduced traffic by over 90%.
- Integrated Apache Avro as a first-class citizen into Spark core for use in RDDs.
- Languages / tools used: Scala, Java, Apache Spark.

Google - New York, NY

Summer 2014

SRE Engineering Practicum Intern

<http://google.com/>

- Implemented load testing infrastructure for newly released software, allowing for early detection of bugs and performance defects.
- Reduced request latency for back-end monitoring services by 70%.
- Languages / tools used: Java, Python Protocol Buffers, Google data stores.

Amazon - Seattle, WA

Spring 2014

Software Developer Engineer Intern

<http://amazon.com/>

- Overhauled internal search capabilities for the Enterprise Data Warehouse team, allowing for near real-time searching for financial datasets and results.
- Designed the new search system to be fault tolerant to preserve data integrity.
- Languages / tools used: Java, various AWS products, including Cloud-Search and SNS.

EDUCATION

Rochester Institute of Technology - Rochester, NY

2012 - 2016

Major: Computer Science

In-Major: 3.82 GPA, Overall: 3.60

Graduated *Cum Laude*

SKILLS & CERTIFICATIONS

Proficient at Scala, Java, Python**Familiar with** C, Go, Rust**Tools** Git, Spark, Avro, Gradle, PostgreSQL, Cassandra, Protocol Buffers, Thrift, OpenJDK JMH**Apache Spark Contributor** Developed a solution to allow for Spark to efficiently read / write Apache Avro data formats. Worked on features in the Spark SQL engine.

SELF-DIRECTED PROJECTS INCLUDE

Raft Key-Value Store<https://github.com/JDrit/RaftService>

- Distributed key-value store that provides linearizability guarantees for all type of operations.
- Out of the box support for leader election, transparent handling of failing nodes, and correctness under network partition.

CRDT Distributed Tally Service<https://github.com/JDrit/gossip-crdt>

- Distributed backend counting service that is capable of withstanding large amounts of concurrent requests.
- Uses G-Counters as the backing asynchronous replication model.
- Utilizes a combination of lightweight threads for the request handling, Zookeeper for cluster state, and Thrift as the shared communication protocol.

Github Language Analyzerhttps://github.com/JDrit/github_stats

- Data analyzer and ingest pipeline using Go to analyze correlations in programming language usage across all of GitHub.
- Provides key insights to language usage trends over time and in comparison to each other.