Daniel Intskirveli

Software Engineer Brooklyn, NY daniel@intskirveli.com

Languages: Java, Scala, Python, SQL, Bash, Kotlin, Go. **Frameworks**: Play, Vert.x, Flask.
Development: Git, Bitbucket, Github. **Containers**: Kubernetes, Docker. **Security**: LDAP, Kerberos.
Messaging: Kafka, RabbitMQ. **IoT**: MQTT, PlatformIO. **Hadoop**: MapReduce, Spark, YARN, Hive, Presto.
Web: HTML/CSS, JavaScript, React, Redux, Webpack, NPM. **CI/CD**: Maven, SBT, Jenkins, Concourse.
Monitoring: Nagios, OpsGenie, Grafana. **Automation**: Puppet, Terraform. **Azure**: HDInsight, Data Lake, EventGrid.
AWS: S3, EMR, Lambda. **Google Cloud**: Storage, BigQuery.

Experience

AppNexus / Xandr

Present – *Oct. 2018*

Senior Software Engineer, Team Lead

50% individual contributor, 50% tech lead for a team of 5. Participating as an advisor to many cross-functional projects. Driving design decisions, hiring engineers, and implementing our "hybrid cloud" strategy.

- **Live data replication**. Now working on high-throughput (over 10Gbps) live-replication of data and metadata (Hive) between storage sites (HDFS, S3, Azure Data Lake).
- **Platform alerting overhaul**. To address engineer onboarding pains, re-implemented the platform's job monitoring system. Application owners now receive well-documented alerts that include resolution hints, contain rich metadata for automation support, self-clear when the issue is resolved, and are safely snooze-able.
- **Data Platform in Azure**. Automated deployment of our proprietary data platform to Azure (HDInsight, Terraform).
- **GDPR compliance**. Developed and deployed a new data pipeline for processing sensitive personally identifiable information. Worked with Operations to provision a new cluster with strict access controls and retention policies.
- **Cloud Export**. Drove adoption of our Cloud Export product, providing direct support to large clients. ~1000 clients signed on with substantially positive feedback.
- **Hadoop distribution upgrade**. Led a year-long effort to deliver the first incident-free Cloudera distribution upgrade in company history.

AppNexus

Aug. 2018 – *Sep. 2016*

Software Engineer II

Scaled and matured a data processing platform to prepare it for higher caliber requirements driven by external and internal customer requests, security audits, and adoption.

- **Web UI**. Modernized an internal platform management UI to use compiled SCSS, minified JS, asynchronous client-side calls, caching, support for themes, and a generally improved user experience (HTML, CSS, JS, Python).
- **Data export**. Analyzing cost related to different scenarios of loading aggregated data to third-party cloud services via peer links and the public internet. Building an automatically throttled sync service based on the aforementioned investigation (Amazon S3, MapReduce)
- **Log ingestion scaling**. Scaling a legacy data ingestion system to improve performance in response to increased volume (Scala, RabbitMQ)

AppNexus

May 2016 – *Sep. 2014*

Associate Software Engineer

Defined the infrastructure for an in-house data processing platform. The platform now manages ~1000 hourly ETL jobs, as well as continuously running streaming jobs, across several global clusters.

- **Data validation**. Developed a data validation engine to check for cross-cluster discrepancies, used for signing off on monthly client invoice calculation (Scala, RabbitMQ, Vertica, Hadoop).
- **Job scheduler**. Designed and implemented a distributed, event-driven workflow engine with resource pools, YARN integration, schedule debugging, and advanced dependency management (Scala, RabbitMQ, YARN, Hadoop).
- **Customer support**. Advised and trained internal customers on the implementation of distributed processing jobs as well as adoption of the internal data platform.
- **Data cold storage**. Implemented cold storage backup of ingested data to an S3 compliant object store (S3, HDFS).
- **System-wide messaging**. Led an effort to move critical services from a database-polling model to an event-driven one by developing the software infrastructure for inter-process communication via RabbitMQ.

AppNexus — **Technical Intern**

Aug. 2014 – Jan. 2013

Developed mission-critical ETL software for the company's data pipeline, which ingests ≈200TB of auction data per day.

- **Click attribution**. Re-implemented the transaction pipeline's click attribution system, reducing runtime by 800%.
- **Client data feeds.**. Designed a complex job for preprocessing data for client downloading using advanced MapReduce features including a custom partitioner (for mitigating data skew) and output writer (for on-the-fly hashing and compression) (MapReduce).
- **HCatalog**. Contributed to the open source HCatalog projected to allow reading from multiple Hive Tables within one job (MapReduce).
- **Protobuf**. Coordinated a migration of TSV data to use protocol buffers for increased reliability and efficiency (Protocol Buffers).
- **Testing**. Fulfilled the mandate of achieving 100% code coverage for a core business logic module (Java, Mockito).

Peek — **Software Developer**

Nov. 2012 – Mar. 2011

Received exposure to a wide array of technologies, namely low-level software development for embedded mobile operating systems

- **Push email client**. Worked on a team to develop a lightweight push email client for the Qualcomm BREW mobile operating system (C).
- **Android game dev**. Developed TipTap, an Android game built on top of the AndEngine OpenGL wrapper (Android, OpenGL).
- **FTK for MediaTek**. Helped port FTK, a graphical toolkit, to the MediaTek mobile platform (C, C++).
- **Custom android ROM**. Created a custom Android build with a modified kernel and user interface, achieving a lower memory footprint for low cost phones (Android).
- **Android app prototypes**. Rapidly prototyped several android apps to demo to clients.
- **Lua interpreter**. Assisted in the development of an interpreter for the MediaTek mobile platform (C, Lua).

Education

City College of New York — **B.S. in Computer Science**

Jun. 2016 – Sep. 2012

Research-focused program at the Grove School of Engineering. In-major GPA: 4.0. summa cum laude. Grove Scholar. Dean's List (2015).

- **Coursework**. Compiler construction, Computability, Computer Networks, Computer Graphics, Operating Systems, Computer Organization, Programming Language Paradigms, Database Systems, Assembly Language.
- **Scalable searchable encrypted database**. Prepared a proof-of-concept implementation for an encrypted database that allows secure searching through large, encrypted datasets.
- **Pascal compiler**. Wrote a Pascal compiler as well as a virtual machine for executing bytecode, in Scala. (Scala, Pascal).