Gurnaaz Randhawa

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Education

- **University of California, San Diego** — San Diego, CA
  Bachelor of Science in Computer Science — *Sep. 2013 – June 2017*

Technical Skills

- **Programming Languages/Frameworks**: 6 years of Java; other languages/frameworks known: Python, Android, C++, HTML, CSS, JavaScript, Spring, Mockito, J-unit testing
- **Software Tools/Technologies**: AWS, Git, Linux, Kafka, Kafka Connect, SQLServer, Docker, Jenkins, TeamCity · Familiar with: Apache Flink, DialogFlow, Firebase, Zookeeper, Gradle, Maven, Avro, Elasticsearch, Kibana

Experience

- **Guidewire Software** — San Mateo, CA
  Software Engineer — *May 2018 - Present*
  - **Infrastructure Monitoring using AWS Lambda**: Developed multiple AWS Lambda functions in Python to monitor both our development and production environment Kafka Connect clusters, Elastic MapReduce clusters, and other vital infrastructure pieces deployed in AWS and alert appropriate Slack channels of any unexpected behaviors
  - **Kafka Serialization/Deserialization**: Expanded our current Kafka Serializer and Deserializer to properly evolve, store, and utilize Avro schemas in a separate, external data catalog (AWS Glue) instead of storing both the schema and data in our Kafka messages; Kafka messages now consist solely of data, increasing downstream applications runtimes by over 100%
  - **RESTful Web Services**: Created essential REST APIs using Java, Swagger Codegen, Spring, and Gradle after working with clients to determine certain API requirements and validations; the REST APIs are being used by 4 different internal teams to access and modify our AWS Glue data catalog
  - **CI/CD Pipeline for Microservices**: Advanced multiple cloud-native microservices that support our current data platform and data ingestion pipelines while ensuring that all projects were part of a new CI/CD pipeline involving Docker, Amazon ECR, ECS, Cloudformation, Teamcity, and Bitbucket to prevent shipping broken code and increase code transparency and visibility
- **Qolsys** — San Jose, CA
  Software Engineer — *July 2017 - May 2018*
  - **Android Development**: Redesigned current real-time data transfer method within our Android application to a secure, fault tolerant solution by introducing and implementing a HTTPS-based solution which led to a gain of 30% in transfer speed between connected devices
  - **ETL Using Apache Flink**: Processed hundreds of thousands of data points using Apache Kafka and Flink, converting messages into a programmer-friendly format, filtering attention-requiring data, and robustly storing data into organized Cassandra tables for easy, user-friendly access
  - **Cassandra Full-text Search**: Accomplished full-text search capabilities to Cassandra tables by integrating Apache Solr and Stratios Cassandra Lucene Index to existing Cassandra tables and resulting in more efficient data analytics and an increase in query speeds by over 90%
  - **Smart Home Chatbot**: Created a digital assistant invoked through Google Assistant using Actions on Google, Dialogflow, Firebase, and Python to improve the user experience for customers by allowing them to less effortlessly change or get the status of their smart home devices
- **Verizon Labs** — San Jose, CA
  Software Engineering Intern — *Summer 2016*
  - **Full-Stack Development**: Designed a web app using HTML, CSS, JavaScript, and jQuery, while integrating the React.js framework, allowing users to view statistics of their IPTV set-top box
  - **Dynamic Data Visualization**: Incorporated relevant data into JavaScript charting libraries such as D3 and Rickshaw Charts while supporting real-time and dynamic functionality

Projects

- **TritonTransfer**: Implemented a protocol for block file transfer in Python by developing a distributed service using an RPC framework and Apache Thrift while also supporting fault tolerance via read and write quorums and having a fail-safe cluster with multiple servers