Gurnaaz Randhawa

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Education

University of California, San Diego — Overall GPA: 3.35
Bachelors of Science in Computer Science, June 2017 — Provost Honors of 3.5+ GPA (Fall '15 & '16, Spring '15)

Technical Skills

Programming Languages/Frameworks:

5 years of Java; other languages/frameworks known: Python, Android, C++, HTML, CSS, XML, JavaScript, Node.js, React.js

Software Tools/ Operating System Platforms:

Linux, J-unit testing, Android Studio, Git, Cassandra, MongoDB, MySQL, Apache Kafka, Apache Flink, Docker, Dialogflow, Firebase

Work Experience

Software Engineer — **July 2017 - Present**
Qolsys

- Redesigned current real-time data transfer method 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
- 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
- Visualized over 30,000 company devices world-wide by converting responses from Node.js REST APIs to a geo-oriented format that Leaflet could deploy for purposes of a dealer dashboard with real-time, centralized data that is easy to understand
- Accomplished full-text search capabilities to Cassandra tables by integrating Apache Solr and Stratio's Cassandra Lucene Index to existing Cassandra tables and resulting in more efficient data analytics and an increase in query speeds by over 90%
- Created a smart-home chatbot 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 devices

Software Engineering Intern — **June 2016 – September 2016**
Verizon Labs

- Designed a web app using HTML, CSS, JavaScript, and jQuery, while integrating the React.js framework, allowing users to view statistics of their Verizon IPTV set-top box
- Created a Rest API in C++ using FastCGI that displayed diagnostics of a set-top box in JSON format using RapidJSON; it is now situated on every set-top box
- Incorporated the JSON data into JavaScript charting libraries such as D3 and Rickshaw Charts while supporting real-time and dynamic functionality

Product & Software Developer Intern — **June 2015 – September 2015**
Verizon

- Responsible for creating test scripts in Python and Bash that were used by the applications team for daily automation of the FiOS set-top box
- Created a graphical interface using HTML, CSS, JavaScript, and jQuery that took information from a CGI script and displayed the information in different charts using Chart.js

Project Experience

TritonTransfer — **Winter 2017**

- Implemented a protocol for block file transfer based on Dropbox in Python by developing a distributed service using an RPC framework and Apache Thrift
- Supported fault tolerance via read and write quorums and by adding a fail-safe cluster with multiple servers

Coolr — **Fall 2015**

- Built an Android Application in Java using Android Studio that allows users to keep track of the contents of their personal refrigerator, reminds users when their food is about to expire, and gives nutritional facts about their food
- Incorporated FatSecret's food and nutritional API as well as SQLite databases to successfully store user's food

Go-To Weather — **Summer 2015**

- Designed an Android application in Java and XML using Android Studio that displays the seven-day weather forecast for a user-inputted city
- Integrated Google's Autocomplete & OpenWeatherMap's APIs, customized list views, and SQLite databases to store a user's previous and favorite locations to improve user experience into the application

6 Degrees of Kevin Bacon — **Winter 2015**

- Wrote a program in C++ that finds the shortest path between a user's specified actor and Hollywood actor Kevin Bacon
- Employed unordered_maps, Djikstra's Algorithm, and other traversal algorithms to successfully complete the program