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:

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

Software Tools/ Operating System Platforms:

Eclipse, Microsoft Visual Studio, Linux, J-unit testing, Vim, Android Studio, gVim, Sublime Text, Git

Work Experience

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

- Redesigned current real-time data transfer method to a fault tolerant solution while achieving a gain of 30% in transfer speed between connected devices
- Processed over 800,000 points of data using Apache Kafka and Apache Flink, converting messages into a programmer-friendly format, filtering attention-requiring data and forwarding it to its correct destination, and robustly storing data in Cassandra tables
- Visualized over 20,000 company devices across the world by forwarding analyzed data in Flink to Node.js REST APIs and converting the response to a geo-oriented format that Leaflet and OpenSourceMap could deploy
- Integrated Apache Solr and Stratio's Cassandra Lucene Index to existing Cassandra databases to incorporate full-text search capabilities while accomplishing more efficient data analytics and improving query speeds by over 90%

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
- Built stronger communication and leadership skills by presenting to executives and VPs regarding my project and its importance

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
- Strengthened software skills while building stronger teamwork & interpersonal skills by working in a business environment

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 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 traversal algorithms to successfully complete the program