Sebastian E. Lopez

Senior Software Engineer

Contact Information

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Experience Overview

15+ years of experience in the software industry.
Many languages like Java, Javascript, Typescript, C++, Python, Ruby, Swift, Kotlin, Go, Rust.
2+ years of experience leading different types of teams.
5+ years of experience working as a mentor for junior developers.

Brief Summary

I am a senior software engineer with a lot of experience using Java, C++, Python, Javascript and Nodejs. I also enjoy coding with Rust, Go lang, Kotlin, Swift, Ruby and Elixir. I have a lot of individual projects using the newer technologies I want to learn. My job is my passion and I enjoy learning new technologies. I enjoy meeting new people and learning from them. I also enjoy learning more about technologies I already know.

Background Information

Citizenship: Naturalized U.S. Citizen, Naturalization on 2001. Security Clearance: TS-SCI

Education

Master of Science in Computer Science, Software Engineering and Program Management. Completion: 2009.
Bachelor of Science in Computer Science, Minor in Business Administration, Completion: 2003.
School for both degrees: George Mason University, Fairfax, Virginia.
Foreign Languages: Fluent in English and Spanish, learning American Sign Language.

Professional Experience

Title: Senior Software Engineer Advisor
Employer: CSRA / GDIT
Duration: Jul 2015 - Current
Data Retrograde project: Worked on a web application to sort, organize, clean, categorize and make available data collected from combat units. The application processed huge datasets into relevant data that met Government retention policies and reduce the storage volume by removing unneeded data. The project used big data technologies via the cloudera stack (the hadoop ecosystem, zookeeper, hbase, spark). The project was java based mainly, and in the frontend it used the angular javascript framework. The python language was used to implement many tools for the project. Implemented many tasks for the web application, backend, big data, frontend, ingestion, class detection, and tools to help the developing team.
FAA UAS project: Worked on a web application for the FAA to register all the commercial drones used in the country. The project was java mainly based using the spring framework and the java jooq library as an ORM. The application used a mysql variant as data persistence. The project used the Angular javascript framework as a frontend, and used several third party commercial tools for scalability, credit card payment, security and traffic monitoring. Implemented many tasks for the web application, backend, frontend, database procedures, calculations, statistics, document generation.
DAE Platform project: Worked on a huge project that provides PAAS and SAAS, it made it easier to add a web application in several different languages; and took away the complexity of data sharing between application and security, authentication, authorization. Implemented fixes in the java and python web application framework, worked on automation tools to test several of the frontend pages and functionality. Also fixed some of the backend projects and implemented the migration from Accumulo to Mongodb. Worked on a frontend subproject based on the React javascript framework.
CRYSS Project: Worked on every aspect of an encryption/decryption project for the FBI. A project using the same concept as the machine built by Alan Turing that cracked the Enigma machine that was a contributing

factor in winning world war II. Wrote many solutions that were critical for the project. One solution was to change the desktop application into a headless rest server solution so the frontend code could communicate to the backend code. Another solution was a concurrency and multithreading solution for the project that would control the number of threads to be run at the same time and when threads are started, paused, or reused. Another solution was to create an external library framework so external libraries could talk to the project, useful for a third party developer to use the application with their own library. Another solution was to setup an installer framework so the project would be able to install it in a client machine. Another solution was to setup an image processing framework to detect symbols in a scanned sheet of symbols and segment the symbols to import to a virtual keyboard. Another solution was to setup a cli version of the application for multiple solutions such as loading sample texts and loading data. Another solution was to let the client decide in which order the decryption threads were going to be run and to pause and resume the thread groups as needed. Worked on many other different tasks and bug fixes for the application backend. Helped in a lot of tasks and helped setup the frontend of the application. The backend section of the application was build with technologies such as Java, the Java concurrency library, Eclipse RCP, Jetty, Jersey, Jackson, Xstream, Marvin imaging framework. The frontend section of the application used the Quasar framework built on top of the Vue javascript framework using ES6. Worked on a windows system tray application that controlled the main application, wrote the code in the Kotlin language. Responsible for the installer of the project, the installer is based on the Nsis installing framework, wrote most of the individual tools using the Rust and Go languages. Wrote individual apps to aid in testing with the web browser. The apps were written in the Swift language for a mac computer used for testing the WebUI.

Title: Senior Software Engineer
Employer: EMC RSA
Duration: Jan 2015 - Jul 2015
Worked on the continuation of the NetWitness NextGen project, which provides real-time network forensics and automated threat analysis solutions. Worked on the web server backend and frontend part of the project. Worked with Java, the Spring framework, Maven, MongoDB, H2, Protobuf, RabbitMQ, Collectd, Puppet, Jenkins, on the backend. On the frontend, worked with ExtJs, jQuery, Momentjs, D3, Websockets. Helped the team to port the frontend code to use Ember Js, Sass, Ember Cli, Broccoli. On the backend changed the application to use the Gradle building tool. For a big portion of my time worked to help the Health and Wellness team, which monitored and made sure all the services were running, and provided the user with monitor data, customization, alerts and alert rules and suppressions.

Title: Senior Software Engineer
Employer: CyberIQ
Duration: Oct 2014 - Nov 2014
Worked on a project providing threat intelligence and ip and domain breach monitoring services. The company combined threat intelligence with analytics to rapidly discover emerging threats, visualize trends, patterns and relationships to obtain situational awareness for optimal decision making. Worked on the spring framework in the backend. The project also used hibernate, spring security, spring oauth, spring boot, spring batch, mongodb, postgresql, mapR, testNg, mockito, selenium, jenkins, and ext js as a frontend framework. Helped port the front end application from AngularJs to ExtJs. The reason for leaving was the company had no funding left, the company disbanded, and all the employees were laid off. I was not aware of the situation when I was being hired.

Title: Software Engineer
Employer: Object Video
Duration: Sep 2013 - Oct 2014
Worked on many different projects and applications. Worked on initiating a java rest service project using jersey and jackson. Worked on requirements and defining messages being passed and architecture of the initial project. Worked on initiating a java rest service project using the spring framework, hibernate and postgresql. Worked on requirements and defining messages being passed and architecture of the initial project. Worked on fixing a rest service using jersey and talking to a mongodb database, adding some validation and changing message being passed. Worked on porting a project from C++ to Java. Project used many features like several design patterns,

inheritance, generics, http request to other servers, logging, etc. Worked on a Java web project that converts foreign language characters drawn on a Canvas to plain text, using OCR technology. Worked on setting up the server and building the client. Installed an OCR cots application, built a java rest server that talks to the OCR server, built a web client using html5, json, base64. Client waits for ocr server to send back result response and display on the client. Client then shows response and offers several options of similar characters for the user to pick in case character rendered was incorrect. Created a web jquery ui widget that can be included in any page that has jquery as a dependency. Widget is a video streaming client for an inhouse video streaming server. Widget connects to two servers for video streaming and tracklet information to populate video frames. Worked on a video streaming server and its web client. Server is written with C# using the websocket technology, part of a bigger project. Client used websockets, base64 and jquery ui widget technology to receive video frames. Client can choose different channels for video sources and date and time for period of playing time. Client also receives video tracklets from another server to add drawings to the video frames. Worked on adding features and fixing bugs on a web client project. Project used mainly jquery. Added and fixed html5 features, page communication via local storage, web workers, map features, street view features, canvas zooming with a lens, page layout, styling, etc. Worked on styling and fixing layout of a webpage, using html5, bootstrap, require js, knockout js, sass and handlebars.

Title: Software Engineer
Employer: Sierra Nevada Corporation
Duration: Sep 2009 - Sep 2013
Worked in all areas of many different web applications. Worked a big portion on a specific google like Application. The application had a text search engine, a document search engine, and geospatial search engine and map capabilities. Worked in the frontend code using the HTML, CSS, Javascript, Google Maps API and GWT. Worked in the backend using Java, Servlets, JSP, JDBC, JNDI, Hibernate, Web Services, XML, Tomcat, Glassfish, Jetty. Worked in the database using Oracle and Postgres. Participated in taking decisions with the team in the applications use cases and what tools to use and what new tools are coming up. Wrote SOAP and Restful Web Services to have data available from an oracle database. Used Apache CXF, Spring, Hibernate. Created Android, iOS, applications for showing different faces of an application. Used the android sdk, the iOS sdk. Projects included geospatial, chart viewers and readers with voice. Other projects included forms with different widgets, autocompletion, and local storage. Created web mobile applications for prototype and in-house products. Used SQLite, rss libraries, jQuery and jQuery mobile. Projects included geospatial, chart viewers. Other projects included forms with different widgets, autocompletion, and local storage. Wrote a java application that standardizes data in different tables with different column names into one big standard table, the application also cleaned the data. Worked on a C-sharp/visual basic project that plotted data on a map and made a few tools to ease drawing on the map and to get information from layers on a map. Made a Solr/Lucene text and geospatial index on an existing Oracle table, updated the index daily. Worked on helping set up a geoserver server and populated the server with some postgis data. Worked on helping set up a nexus maven server to be able to host in-house java libraries. Worked on helping set up a jenkins service via a tomcat server. Jenkins will run different types of tests after every commit. Worked on a Google Maps javascript library to add some map drawing functionality to a product. Wrote a javascript Simile Timeline library wrapper available for a product to have time view with map view capabilities. Wrote an XSLT library that converts xml data into a html page and pdf page. Wrote an in-house ruby on rails project that showed last uploaded data and other important data. Worked on a python project that crawls several websites and gathers data and add data to a database. Wrote eclipse plugins for icon decoration, assisted views and autocompletion. Wrote a Flash/Flex project that showed different types of charts made of existing data. Worked on a Grails web project, also used jQuery and jQuery UI. Added functionality to upload files and show them instantly. Wrote some R code to represent quantified data in a motion chart using the googlevis library. Worked on CMMI group to make the organization CMMI level 2. Learned and made a presentation to spearhead the company to use HTML5, CSS3 and Node.js

Title: Software Engineer/ Software Integration Engineer / DevOps / Lead
Employer: Imagine One Technology, Ltd.
Duration: Jun 2004 – Sep 2009
Worked as a Software Developer on the SIAP Joint Government Project for the Battle Management Command

and Control domain team. Responsible for designing, coding and unit testing the software. Responsible for making sure different functionalities of the product were designed and maintained properly. Took over the lead position of the team. Development was made using C++ and C. Wrote some C++ static and shared libraries in linux and windows, libraries held temporary data and applied some math functionality to the data.
Worked as the Lead System Software Integrator on the SIAP Joint Government Project. Responsible for delegating responsibilities to a team of four people. Responsible for keeping the product always stable and executing correctly. Responsible for smoothing the cycle turnover of the project. Responsible for maintaining and adding functionality to the GUI version of the product using Java and swing. Created and maintained an in-house LAMP project that recorded all of the project team's submissions and made data available with them, for example release notes. Created several batch, shell and python scripts that automated some of the work like regression testing and making a release from the subversion release trunk.

Technical Skills Summary Keywords

Languages: Java, Javascript, NodeJs, C++, C, C#, Python, Ruby, Kotlin, Rust, Golang, Elixir, Swift.

Web Concepts: HTML, HTML5, CSS, CSS3, Sass, Less, Javascript, Coffeescript, Typescript, NodeJs, Npm, Yarn, Webpack, Grunt, Gulp, JQuery, JQuery UI, Sencha Ext js, Backbone.js, Knockout js, Angular, Vue, React, MEAN stack, Google Maps, Leaflet, OpenLayers, Flash/Flex, JEE, Web Services, Jersey restful framework, Spring Framework, Spring Batch, Spring Boot, Express, Sinatra, GWT, Jetty, Apache Tomcat, Glassfish, Geoserver, Ruby On Rails, python Cherrypy, python Bottle, python Flask, Grails, LDAP, ActiveMQ, rss libraries, Postman, Newman, many java libraries, many other javascript libraries.

Data Concepts: Oracle, MySql, Postgresql, SQLite, Hibernate, Jooq, MongoDb, Lucene, Solr, H2, Hsqldb, Apache Derby, CouchDb, Redis, Graph databases, JasperReports, the Hadoop ecosystem, MapR, HBase, Accumulo, Spark, Zookeeper.

Other Concepts: Git, Mercurial, Subversion. Vagrant, Docker. VirtualBox, Vmware. Usage of many modern terminals, shells, file managers, and other development tools. Usage of many modern IDEs and editors.