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Software Engineering

Profile: Energetic, dynamic, proactive. I find the solution to the problem presented. I have good interpersonal relationship and communication. I am caring, dedicated, trustworthy and responsible in my work.

Professional Experience

Amazon

July 2014 – Present

Software Developer Engineer

Amazon is an American electronic commerce company with headquarters in Seattle, Washington. It is the largest Internet-based retailer in the United States. Amazon is one of the leading Tech companies of the world.

Duties

Advertising – Core Platform

- Lead, design and execute an end-to-end DevX solution to improve the developer experience across the Advertising organization:
 - Shifted core platform teams to use data-oriented architecture.
 - Prevents Away Team engagement with core platform teams.
 - The system deploys code dynamically across the core platforms without undergoing a deployment or downtime.
 - Language agnostic.
 - Improves the OE experience across the core teams and feature teams.
 - Feature teams can own their development cycle end-to-end.
 - Improves productivity and feature release.
- Lead, design and execute a cross-organization project to unified global identifiers across the Amazon Ads stack.
 - Project involved 80+ teams, across 5 different Amazon organizations
 - Allowed teams to scale and unblock their roadmaps due to previous ID generator dependency.
 - Decoupled systems and improve latency up to 30% across different APIs across the different systems in the stack.
- Lead the team to build the system in charge of storing and delivering all the customer intended metadata for Display Ads across all Amazon.
 - Write ahead log based solution with multiple replicas that asynchronously updates downstream dependencies.
 - Support many notifications mechanism to dispatch and replicate the data across multiple systems.
 - Supports federation across multiple teams to enable new features.
- Lead and raised the bar on the Operational Excellence for the organization.
 - Set the OE strategy and vision to support the tier-1 business operation.
 - Lead and design projects to automate human interventions to improve the team operational weight.
 - Design the infrastructure logistics across multiple regions and stages.
- Lead tech-talks in the org across multiple teams.
- Design and develop an end-to-end testing framework to guarantee backwards compatibility while migrating data from the legacy system.
- Design and build a load test framework for the team that helped identify the system limits.
- Propose and write vision projects to improve the system to scalability, maintainability and flexibility to add more features while enabling a good customer experience.
- Design a solution to reduce the system latency by 35%.

- Mentoring and developing Amazonians.

AWS – Simple Workflow Service

- Design and create a new consistent hashing algorithm to improve the shard to host distribution.
 - 58% improvement on the standard deviation.
 - Implemented a dynamic migration strategy with no downtime.
 - Improve host throughput
 - Cost reduction.
- Design and create an annotation-based framework that will gather metrics to have a local cache counter.
 - Works across the AWS teams and services.
- Design and create a distributed counter that gathers the pending tasks per customer.
 - It is the cornerstone that will help us build a control plane to re-allocate shards depending on the customer traffic.
 - Built different features based on these solutions. e.g. send customer related metrics to CloudWatch so they could react accordingly to this data.
- Design and build a host throttling solution to prevent shards of going down for high traffic or hardware problems.
- Design and build a load test framework for the team that could be easily plugged in into our different pipelines. The framework would allow each service owner to set it up accordingly to their requirements.

Marketplace – Seller Experience

- Redesign Workflow Designer to be a microservice and distributed oriented architecture. The project gained SRP, separation of concerns, scaled better and was able to support different technologies to be exported to.
- Contribute to the design, creation and development of Workflow Designer. This system allows process engineers to build workflows by using bpm notations without the need of software engineers.
 - Established the development guidelines for the team.
 - Create and design a framework that does the serialization/un-serialization of any given POJO based on annotations to the hierarchical data base.
 - Create and design the backend APIs that store the metadata needed to build the workflows.
 - Build the continuous deployment cycles and operation excellence for every part of the project.
 - Creation of batch processes to constantly update our tools metadata in AWS.
 - Creation of UI components.
 - AWS management.
 - Bar raiser of designs and code reviews related to the project.
 - Developed the most critical features of the project.
- Lead the Design Reviews in Costa Rice Dev Center across multiple teams.
- In order to reduce the amount of operational work the team was having and improve the customer experience, I proposed the creation of self-service tools for our clients in order to decrease MTTR.
 - Design, create and develop the tools and APIs needed for the project.
 - Proposed and built an audit functionality to ensure that the entire process would be owned by our clients.
- Built an aggregator API that gather information from several resources in parallel.
- Contribute to the design, creation and development of the 83+ workflows.
 - Established the development guidelines for the team.
 - Created shared libraries for the team in order to reuse code and reduced their development time.
 - Performed enhancements to the workflow engine we were using in order to improve the experience of our clients.
 - Creation of back-end APIs that were needed in order to build these workflows.
 - Met with our clients to gather the requirements they needed. By working backwards from the client, I was able to reduce the scope of 3+ workflows.
- Active participation in the Case Management platform migration:
 - Create and develop the main service: create case. Create case is the most used functionality by our clients.
 - Improved the search service availability from 94% up to more than 99% by fixing one of the major bugs
- Raised the bar on the Operational Excellence for the organization unit:
 - Creation of dashboards to improve the on-calls and ops-review experience to determine the root cause of any given problem. This helped to reduce the time needed to find and fix the issue on a high severity event.

- Creation and definition of monitors and alarms that controlled our services health.
- Defining the areas that needed to be monitored: Hardware, VIPs, availability, throughput of the services, dependencies, failures, deep ping tests, among others.
- Developed shell scripts for monitoring and management purposes.
- Creation of service metrics for business projections.
- Fixed the metrics system of the main backend service which wasn't showing any data for several months.
- Developed multithreaded Java based applications.
- Active participation in Scrum

Backcountry

March 2013 – July 2014

Software Engineer

Backcountry is an online retailer that sells outdoor recreation gear for hiking, camping, cycling, rock climbing, snow sports, and more. Nonetheless, Backcountry is a very powerful and mature IT company.

Duties

- Contribute to the design, creation and development of the HUB 2.0.
- Contribute to the design, creation and development of company's cache using MongoDB.
- Contribute to the design, creation and development of the cache rest server.
- Contribute to the design, creation and development of the feeds re-platform service.
- Contribute to the design, creation and development of the emails re-platform service.
- Develop of different reports for the business.
- Creation of continuous delivery workflows using Team City and Jenkins for our applications.
- Develop shell scripts for monitoring and management purposes.
- MongoDB management.
- Develop multithreaded Java based applications.
- Active participation in Scrum

GBM Corporation

July 2010 – March 2013

Software Specialist

GBM is an IBM Alliance Partner since 1991. GBM has assimilated the best of the organizational culture of their partner IBM. I started my contract as an intern in order to finish my Bachelor degree. Once I finished my internship, they hired me to be part of a regional software department based on SOA practices.

Since the beginning of my journey I was assigned to GBM's main project. I'm currently working on the team in charge of integrating the various systems comprising the solution of a project named PESSO, which is a project that has a national impact since we are working with Costa Rica's only national telecom company.

Duties

- Active participation in activities through all phases of the system development life cycle.
- Active participation in meetings with the client.
- Development of the enterprise service bus. This includes any type of messaging: Web Services, queues, SCA, etc.
- Development of scripts in Shell and Python required in order to automate the deployment and monitoring of the applications.
- The development of different programs or modules required for the enterprise service bus.
- The development of a dashboard using JMX to facilitate monitoring services.
- The development of a Telnet Client for integrating different services to an Ericsson platform.
- Manage the infrastructure where our applications run, mainly the application and process server.

Besides, I have done Proofs of Technology, Proofs of Concepts and inner training to my department teammates.

Glicic Comercial - Distributed Application (Desktop)

Feb 2012 – Apr 2012

Software Consultant.

As part of my personal goals, I took on a project to build a parking logistics application. Some of the challenges that made this a very attractive project included: the application needed to be lightweight with a very small memory footprint allowing it to be run on a very basic computer; the design of a simple and user-friendly interface so the

change of application did not affect the employees; the different payments needed it for their clients. The results surpassed the stakeholder's expectation. The technologies used for the development of the application were: Java for the backend, reports and graphic interface development; MySQL for the database management system.

GBM Costa Rica

Jan 2010 – May 2010

Software Specialist.

During my internship I was assigned to a project called VertICE with the ICE, Costa Rica's national telecom company. This project's goal is to restructure ICE's OSS and Monitor System.

Duties

- Active participation in activities through all phases of the system testing life cycle.
- Active participation in meetings with the client.
- Design of the traceability matrix and knowledge plan.
- Implementing black and white box testing, non-functional testing, report bugs, and test automation.
- The development a robot in order to simulate the CRM full fitment process so the testing could be done.
- Used the Quality Manager Tool for managing our quality processes.

Teaching Experience

Universidad Internacional de las Américas

August 2011 – March 2013

Professor

I'm in charge of teaching the course of Programming II. The course aims to teach the students the paradigm of object-oriented programming using JAVA language with strong UML design. It starts since the most basic concepts until they can make a truly object-oriented application with a graphic interface and database connection. I try to begin teaching them about OOP design patterns, and the best practices of programming. I recreated the course content for the purpose to be more reliable for nowadays needs.

Universidad Internacional de las Américas

August 2011 – March 2013

Professor

I'm in charge of teaching the course of Computer Language. The course aims to teach the students the importance of the DBMS; why are they important in today's business operations. The course teaches them to design, and create from the start a database. Once it's well defined by going through database normalization, they begin administrating the database by using the SQL language throughout different types of queries among the database's tables.

Skills Summary

Software Development

Skills: Distributed systems patterns and design, concurrency, micro-services, Operational Excellence, SOA, AWS design and development, NoSQL and relational data-bases, Webservices with different standards like REST, GRPC, SOAP and others, design pattern, OOP, AOP, programming languages with emphasis on Java, Go, Python and JavaScript, Shell Scripting, testing skills, infrastructure management, design and review Use Cases, UML, business concepts like BPM, BPEL, and SCA, understanding off different technologies like MQ and JMS, HTML-Dojo, JSP, HTML, Android development, Maven, Spring, Git, Hibernate, Resteasy, JSON, among many others.

Experience: 12+ years of experience of leading distributed systems, University with honors, and self-study.

Achievements: Recognition from the Korean Institute of Science and Technology, certifications, courses, excellent feedback across peers, and over achievement my qualifications in Amazon and in my previous workplaces.

Communication

Skills: Mentoring, leadership, understanding and ease in interpersonal relationships.

Experience: I was a college professor for almost two years, which by definition require interpersonal relationships and easy expression of ideas, patience, and nice communication. Lead and orchestrate meetings, presentations and projects throughout my professional career.

Achievements: Being one of the most qualified teachers of the department in each semester evaluations made by students. Having very good feedback from my supervisor and colleagues. Being thanked by my students for their achievements in their respective work.

Education

Bachelor in Software Engineering with Honors.

Universidad Latina de Costa Rica. 2007-2010

Associate in Development and Software Technologies with Honors.

Cenfotec 2007-2010

Certifications

2010 - IBM Certified Solution Developer. WebSphere Integration Developer V6.2

2011 - IBM Certified Solution Associate BPM Developer BPM Blueprint. WebSphere Lombardi Edition V7.1

2011 - IBM Certified Integration Developer. WebSphere Enterprise Service Bus V7.0

2012 -IBM Certified SOA Associate

2012 -IBM Certified SOA Solution Designer

Additional Professional Qualifications

2007 - Universidad de Costa Rica. San José, Costa Rica. CCNA Module I

2007- Universidad de Costa Rica. San José, Costa Rica. CCNA Module II

2007- Universidad de Costa Rica. San José, Costa Rica. CCNA Module III

2007- Universidad de Costa Rica. San José, Costa Rica. CCNA Module IV

2010- GBM. San José, Costa Rica. IBM WebSphere Portal V6.0 Fundamentals

2010- GBM. San José, Costa Rica. IBM WebSphere Portal V6.1 Application Development I and II

2011- Universidad Ulacit. San José, Costa Rica. Android Application Development

2012- GBM. San José, Costa Rica. IBM WebSphere Application Server v8.0

2012- GBM. San José, Costa Rica. IBM WebSphere Virtual Enterprise

2012- Udacity. Building a Search Engine

2013- MongoDB University. M101J: MongoDB for Java Developers

2014-Present: 38 Amazon Internal Certifications.

Languages

Spanish – Native

Ingles - Speak fluently and read/write with high proficiency

References

Available upon request.