Luis Santos

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I'm a passionate technical leader focused on building great products
and leading great teams. I've architected and built horizontally
scalable systems on Amazon Web Services and Microsoft Azure.

I work with modern technology stacks such as JVM (Java,
Kotlin, Clojure) Spring Boot, Kafka, and Kubernetes.

Experience

March 2019-now

Technical Lead

Movingimage

- Leading multiple agile teams to deliver software on time
- Designed a new search system based on GraphQL that provides a flexible and faster way to access data
- Redesigned existing systems into microservices to achieve better scalability and maintainability
- Other responsibilities
    - Cost management and reporting
    - Project planning
- Key Technical Skills
    - Kubernetes, Helm
    - Elasticsearch
    - Grafana stack
    - Azure Cloud: Blob Storage, AKS
    - FFMPEG
    - RabbitMQ, Kafka
    - Java, Kotlin

Oct 2018-Jan 2019   **Senior Data Consultant**

- Elasticsearch
  - Optimization of the Elasticsearch cluster to better meet performance requirements
  - Redesign of ES queries to meet performance requirements
- Serverless data lake
  - Development and maintenance of existing data lake ETL processes using: AWS Athena, AWS lambda functions and Aws Glue
- PoC using DWH and analytical DB such as ClickHouse and AWS Redshift
- Architecture proposal to integrate 2 legacy systems. The proposed architecture uses modern technologies such as Apache Kafka, Apache Kafka Connect and Docker to integrate 2 legacy systems. The proposal tries to achieve the following goals:
  - Reduce manual user input in both systems
  - Reduce data inconsistencies between the 2 products and deliver a better experience for the end-user
  - Provide a single source of truth

Jul 2017-Sep 2018   **IoT Lead Developer**

Smartfrog

- Promoting development best practices such as
  - Test Driven Development
  - Infrastructure as Code
- Implementing java services using
  - Hibernate, MySQL, DynamoDB, SpringBoot and Java8
  - AWS Cloud Formation, AWS DynamoDB, MQTT and AWS Kinesis
- Help design and implement high available microservices using an event-driven approach
- Lead a multicultural team to deliver the next generation device management platform
- Promote the use of the SCRUM framework as a tool to organize workloads and provide visibility into the development process
- Architect and develop a new camera firmware:
  - New modular design that reduces the development cost and allows for greater flexibility
  - Improved real-time communication between the camera and the cloud
  - Support for different streaming protocols
  - Multi-platform and Multi-device support
  - Design with modern technologies such as C++, MQTT, IoC, DI, Cmake, GTest and GMock, Poco C++ Framework

Feb 2016-March 2017   **Software Architect**

SolarWinds MSP (previously LogicNow)

- Promoting awareness of development best practices across the company
  – CI/CD, TDD
  – Code review
  – Development patterns, Integration Patterns
  – Security best practices
- Help teams design and implement high available distributed solutions using industry patterns such as micro-services, message queues, REST architectures, and stream processing
- Help teams choose from the wide range of AWS technologies available
- Improving the existing data platform by:
  – Designing a new ingestion pipeline based on **gRPC** and **AWS Kinesis**
  – Introducing the **Lambda Architecture** as a way to decouple the components and enable real-time use cases
  – Suggesting the **ORC** file format as a replacement for the legacy gzip files. Up to 10x performance improvement and 50% saving on storage requirements
  – Suggesting SparkSQL as a standard way to get the data accessible to internal users

Sep 2014-Feb 2016   **Senior Software Developer**

SolarWinds MSP (previously LogicNow)

As part of a small team, I was responsible for the design and implementation of the next generation of infrastructure capable of taking millions of devices under management.

This new infrastructure, based on the **Event-Driven Architecture**, is composed of several highly decoupled micro-services and uses a Message Queue (**RabbitMQ**) as the main communication channel between services.

As part of this team, I shared the responsibility of:

- Introducing company-wide code reviews using **Phabricator**
- Introducing the **Onion Architecture**
- Introducing the **Repository pattern** as a complement for the Active Record pattern
- Introducing a **DI container**
- Promoting the use of Docker and **IAC**
- Introducing a message queue a way to decouple and scale components

Key Skills:

- JAVA, JAX-RS, Guice, Guava, maven, Junit, Mockito
- AWS, Docker, DynamoDB, Elastic beanstalk
- Ansible, Linux
- PHP, PHPunit, composer, SF2

Apr 2014-Aug 2014   **Java Developer**

Portugal Telecom, **Caixa Magica Software**

As part of this project I was responsible for maintaining a **message queue** solution.

The main goals were:

- Upgrade from Netty 3 to Netty 4
- Rewrite the java client using Netty 4 and NIO
- Maintain the existing clients written in PHP, C, Perl, and Python

Key Skills:

- Netty, NIO, IP, TCP, Wireshark
- Java, multithreading programming, Maven, Junit
- JSON, XML, Protobuf, Thrift
- Linux, Android

Oct 2011-Apr 2014	**PHP Developer**
	Portugal Telecom, **Caixa Magica Software**
	Frontend and API developer at **wallet.pt**, a mobile, tv and web payment solution.
	key Skills:
	• PHP, JS, HTML • SOA, REST • OWASP TOP 10, PCI-DSS, Cryptography, SSL • Unit Testing, Continuous Integration • MySQL, Memcache, Message Queue
May 2008-Oct 2011	**Software Developer**
	Paul Stricker SA
	Software Developer and Ops.
	key Skills:
	• PHP, JS, HTML, Java, JAX-WS, JAX-RS, Hibernate • Windows Server, Cisco network appliances, SIP • C#, .NET, Microsoft Fox Pro, ETL
Jul 2013-Dec 2013	**Community enabler**
	PHPLX
	Responsible for organizing a monthly event

Education

2005–2011	**BSc, Informatics Engineering**
	Instituto Superior de Engenharia de Coimbra, Portugal

- SQL Databases (Oracle, SQL server)
- Software engineering, Software patterns, and algorithms
- Software Development Java, EJB, C/C++, C#.NET, ASP.NET
- Networks and protocols, TCP/IP, OSPF, RIP, CCNA

Interests

Other interests

Java:

- GraalVM and AOT compilation in serverless environments
- Dependency injection in serverless environments using Dagger
- Kotlin - Kotlin modern and expressive features deliver great productivity at a lower entry barrier. A great alternative to Java.
- Clojure - Modern lisp on the jvm and javascript

RabbitMQ: Message Queues are a key piece of any distributed system. I do a lot of research about MQ patterns and how to solve some common problems. I also contribute to RabbitMQ mailing list every time I have an opportunity

Arduino and digital electronics: One of my hobbies is to build small digital circuits that let control devices around the house and in the process improve my understanding about the different technologies available to consumers. DIY is a fun and pragmatic way of exploring the concepts of Computing and IoT.

Lisp, Scheme and Racket : On free my time I've been learning Racket. My interest in such languages is due to its simplicity. This simplicity and flexibility make them very powerful and the perfect vehicle to implement new programming concepts without the need to change the language

Other

Languages

- Portuguese (Native speaker)
- English (Professional Speaker)
- Spanish (Basic understanding)
- German (Learning)