Leandro Martelli

Torrent, València, Spain   •   leandro@martelli.pro   •   +34 67 1119578

Introduction

Experienced Software and Infrastructure Engineer with a robust background spanning over 20 years in software development and systems administration and a proven track record of delivering innovative and impactful technological solutions.

Distinguished for innovation, a results-driven approach, efficient work ethic, and consistent high throughput. Proficient in analytical problem-solving, logical/mathematical thinking, and rapid assimilation of new technologies.

Professional Experience

Monad Inc.   *Remote Spain*
Senior Software Engineer   *May 2023 – Feb 2024*

Operated at the interface between software development and infrastructure, applying skills in both domains to optimize application efficiency and boost developer productivity.

- Engineered a simple and clever API connector testing framework, substantially improving testing coverage and virtually eliminating connector issues in production.
- Designed and implemented the core of a new data processing framework using Apache Spark (pyspark) and Apache Iceberg. This initiative addressed existing shortcomings, reduced code duplication, and significantly enhanced overall performance and developer productivity.
- Led the collaboration with infrastructure engineers, playing a pivotal role in the development and deployment of the Spark cluster and Iceberg data lake on AWS.
- As part of my day-to-day responsibilities, I offered consistent developer support and technical guidance, eventually establishing expertise in troubleshooting and becoming the go-to person for challenging and complex issues.

Keywords: Linux, Python, SQL, Git, Github, Software Testing, Apache Spark, Apache Iceberg, DuckDB, PostgreSQL, Parquet, Avro, JSON, Docker, Kubernetes, AWS, Redshift, EC2, S3, SQS, DBT, Prefect.

Meta Inc.   *Ireland and remote Spain*
Senior Site Reliability Engineer   *Feb 2017 – Feb 2023*

Part of the infrastructure provisioning team, contributing to the design, development, and management of core services essential to the server lifecycle.

- Designed and implemented an in-house pub/sub system in Go to facilitate communication across the stack, reducing provisioning time by up to 20%. Leveraged the same system for efficient transport of provisioning events, enhancing observability and reliability.
- Designed and implemented the OS image fetching strategy utilizing the Torrent protocol, resulting in an approximate 98% reduction in download traffic for backend services. Subsequently, took charge of designing and coordinating engineers in the development of the remaining components of the Torrent infrastructure.
- Designed and implemented a high-performance centralized reboot & shutdown management system in Go, addressing design issues and significantly increasing load capacity by approximately 30 times compared to the previous system.
- As an intern manager, led the coordination of a successful intern project, overseeing it from development to production deployment, and also represented them during performance reviews.
- As part of the day-to-day work, engaged in the on-call rotation for core services, offering assistance to fellow engineers as needed.

Keywords: Linux, Python, Go, Bash, SQL, Buck, Chef, Mercurial, Thrift, MySQL, TLS, DHCP, DNS, TFTP, u-root, linuxboot, EFI, Cryptography, TCP/IP, BGP, PXE Booting.

Igarapé Institute *Brazil*
Senior Software Engineer *Sep 2015 – Jan 2017*

As a senior software engineer, contributed to the design, implementation, and deployment of various software projects for the institute.

- Led the design and implementation of CrimeRadar, a mapping web app developed in Python and Javascript, utilizing crime forecast data from a third-party tool. The system demonstrated consistent performance, even after garnering attention on high-volume news sites (Wired - http://bit.ly/49TxZBz and Bloomberg - https://bloom.bg/3SW55tD).
- Oversaw security enhancements for the SmartPolicing mobile app (Java for Android) and backend system (Javascript/NodeJS), resulting in the successful completion of a third-party security audit.
- Created a Java mobile library that incorporated live streaming and simultaneous recording functionalities, subsequently integrated into the SmartPolicing Android app. The library was built using the H.264 codec and core Android imaging APIs. The web counterpart utilized websockets and the Angular framework.

Keywords: Linux, Python, Java, Javascript, SQL, Cryptography, Android, Mobile Development, Angular, Websockets, Docker, Cloud, GIS, LeafLet, H.264 Encoding, Video Processing, RabbitMQ.

Getulio Vargas Foundation *Brazil*
Senior Software Engineer *Sep 2013 – Sept 2017*

Led all information technology-related activities within the Public Policy Analysis Division, spanning product design, software development, and data management.

- Created an internal Python tool for fetching and analyzing large volumes of data from the Twitter API (via Firehose).
- Led the design and implementation of multiple web applications using JavaScript and Python, utilizing the Flask framework.

Keywords: Linux, Python, Javascript, Scala, Apache Spark, CoffeeScript, Cloud, PostgreSQL, Twitter Firehose API, Chrome Extensions, Nginx, Etcd.

CPRM - Brazilian Geological Survey *Brazil*
Senior IT Consultant *2013 – 2017*

Provided expert insights to both the infrastructure and development teams on advanced topics in software development, systems and network design, and administration. Additionally, conducted courses on database administration and GIS application development.

Keywords: Linux, PHP, GIS, Javascript, Virtualization, EMC Storage, L2 and L3 Networking, VPN, 802.1Q, Zabbix, Cisco IOS.

Business Owner / IT Consultant *2011 – 2013*

An individually owned and privately held company, focusing on software development and consulting.

Keywords: Linux, Java, Python, C++, iOS Objective-C, Websockets, Zk Framework, PostgreSQL, IPTables, Windows Server.

K2 Systems *Brazil*
Java Software Engineer *2013 – 2013*

Designed and implemented a satellite data processing application for the SINDA (National System for Environmental Data), among other projects.

Keywords: Linux, Java, Apache Groovy, HBase, Zk Framework.

LIne-A - Interinstitutional Laboratory for e-Astronomy _Brazil_
IT Coordinator _2006 – 2010_

Coordinated the development of an internationally collaborative web-based platform for petabyte-scale data management and scientific analysis, partnering with US research institutions.

Keywords: Linux, Python, Javascript, Java, Fortran, C/C++, TurboGears, JQuery, Lustre, GlusterFS, Oracle, PostgreSQL, Microsoft SQL Server, FITS Image Format, Cisco iOS, Routers, Switches and Firewalls, Link Aggregation.

Brazilian National Observatory _Brazil_
Systems and Network Administrator _2001 – 2005_

Led the technical management of systems and network infrastructure.

Keywords: Linux, Windows, Sparc Solaris, NFS, LDAP, Qmail, Apache HTTPd, DNS, Cisco iOS, Routers, Switches and Firewalls.

Education

Rio de Janeiro Federal University _1995 - 1997 (incomplete)_
Bachelor in Physics

Languages

- Portuguese: Native.

- English: Fluent.

- German: Upper intermediate (DSD-II diploma).

- Spanish: intermediate.