

PAULO ALEXANDRE CANILHO

Software & Telecommunications Engineer

Engineer passionate about the upcoming cloud web services and high-performance applications.

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SKILLS

- **Programming languages:** Python, JAVA (including RESTful web services, Hibernate 3.0 and SPRING BOOT), JAVA Android, Python, Common LISP, ADA Spark 2012+.
- **RDBMS:** Sybase, Oracle, MySQL, PostgreSQL, MSSQL, MariaDB, AWS Redshift.
- **NoSQL:** MongoDB and Redis.
- **Web development:** Node JS, PHP, HTML, CSS, JavaScript, D3.JS.
- **DevOps:** TomCat, NGINX, Jenkins, Databricks/SendGrid RESTful API, UNIX and MS Server 2008+, OpenStack and Docker.
- **Amazon web services:** Elastic beanstalk, S3, SES, SNS, JAVA8 SDK, Route53, VPC, CloudWatch and ELB.
- **Agile, classical methodologies and process improvements models:** SCRUM, SSADM, XP, CMM, Kanban and DSDM.

EXPERIENCE

Software Engineer : Clear Returns Ltd. (Apr 2016 – Nov 2016)

- JAVA REST services design, implementation and deployment using ODATA metadata format for e-commerce ease of system integration using the AWS.
- Responsible for the creation of the ongoing data processing systematic method for handling big-data ingestion and processing with a high requisite variety in Redshift SQL dialect.
- Responsible for the DevOps and AWS JAVA SDK usage for internal process automation involving S3, RDS and Redshift seamless integration with various external services such as: SendGrid and Databricks for machine learning models;
- Security measures implementation at all stages of the development life-cycle;

Computer Engineer : CERN (Jan 2015 – Jan 2016)

- System integration of a mobile monitoring solution with CERN's new provider network, including SNMP alarms setup and management queries using MSSQL.
- Creation of a near to real-time cybernetical approach to a dashboard system where a user could control and verify the latest status of mobile remote

units via a dynamic, user friendly and easy-to-use dashboarding system in HTML/JavaScript/CSS, D3.JS and PHP.

- Security measures employment against SQL Injection.

Android Developer : CERN (Jun 2014 – Sep 2014)

- Creation of two mobile applications for the Android 2.1 system and above, with the aim of achieving a real-time monitoring system over the hardware components such as the linear accelerator detectors.
- Server-side implementation based in UNIX using JAVA for data management and network capabilities handling.

PROJECTS

- **SIMP system** (research project) for monitoring of the encryption algorithm used in 2G, 3G, 4G and WiFi networks that the given user has been connected to. This is a multi-modular system consisting of an Android application, AWS backend services and Node JS dashboard. Project page available at: <https://www.simp-dashboard.com>
- **Monitoring Dashboard** for near real-time mobile networks 2G, 3G and 4G SNMP alarm system.
- **SDR TETRA** (400MHz) Research-driven application development using JAVA APIs for signal processing and GUI.

EDUCATION

MSc in Software Engineering with Distinction:

Heriot-Watt University – Edinburgh Campus (2016 – 2017)

BSc in Telecommunications and Computer Engineering:

ISCTE-IUL – University of Lisbon (2011 – 2014)

Research Grant :

Microsoft PT – Adetti IUL (Jun 2013 – Jan 2015)

- Common LISP interpretation engine integration with JAVA's Swing libraries for the construction of a LISP graphical interface and ultimately an IDE;
- Shape-grammars algorithms implementation in both common LISP and JAVA for artificial-intelligence and machine learning data processing.

LANGUAGES

- Bilingual Portuguese/English;
- Experience with reading/writing/spoken French.