



# ALONSO ISIDORO ROMÁN

Software architect/Data Engineer

## CONTACTS

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## WEBSITES & SOCIAL LINKS

- GITHUB  
<http://GitHub.com/alonsoir>
- STACKOVERFLO  
LOW  
<https://stackoverflow.com/users/449303/aironman>
- TWITTER  
[http://@alonso\\_isidoro](http://@alonso_isidoro)
- GITHUB SHOWCASE  
<https://www.githubshowcase.com/alonsoir>
- OR  
LOG  
<http://aironman2k.wordpress.com>
- LINKEDIN  
<https://www.linkedin.com/in/alonso-isidoro-roman-8ab57445/>
- ABOUT.ME  
[https://about.me/alonso\\_isidoro\\_rom](https://about.me/alonso_isidoro_rom)  
<http://getstarted>
- SKILLS
- Java
  - Spring Framework
  - Hibernate
  - JUnit testing
  - html
  - javascript
  - SQL
  - Application Servers
  - git
  - Big Data
  - Spark
  - Cassandra
  - Hadoop
  - Kafka
  - Flink
  - Deeplearning
  - Cloudera
  - Concurrent programming
  - IOS coding
  - Maven
  - Hudson
  - Jenkins
  - JUnit
  - Selenium
  - Scala
  - Akka
  - Apache software projects
  - GNU/Linux
  - Bash scripting
  - python
- LANGUAGES
- Spanish
  - English
- HOBBIES
- Sciences
  - Videogames
  - reading sci-fi
  - graphic novels

## ABOUT ME

A software engineer, eternal learner, timelessly curious. I love science, all of them, but particularly particle physics, astrophysics, DNA study and everything related to how to use technology to improve people's health, quality of life and productivity.

I also love arts and artist from renaissance movement, DaVinci, Michelangelo, Rafael, of course Goya, Velazquez, El Greco, Tiziano, representatives of the impresionist movement, such as Van Gogh, Renoir, Monet, Degas. Of those who are alive I like Antonio Lopez very much.

I have dreams to fulfill, to be able to work one day at CERN in Geneva contributing in some particle physics experiment. Another dream is to be able to work at the ESA trying to find habitable exoplanets, to work helping to create a system of recommendations so that medical specialists can quickly find a diagnosis to diseases and finally I would like one day to create a foundation to help train the new generation of engineers from their earliest childhood, learning to design hardware and software while they play.

## WORK EXPERIENCE

### SOFTWARE ARCHITECT/DATA ENGINEER

Stratio  
Sep 2017 - Jan 2020

I participate in the design and development of a project to NCOI (NCOI Opleidingen, @NCOIopleidingen), designing and developing a scalable microservices architecture to be able to perform Extract Transform and load data from different sources using json, csv, txt files and external normalized databases. These data are used by a referral system so that college students get the best possible referral based on what the college knows about them. The idea is to design a scalable distributed architecture of data consumption following the CQRS pattern, Command Query Responsibility Segregation, so that following this pattern, I can segregate the writes and readings in a distributed system so that the writes go to a cluster of data independent of the other cluster of data readings.

Together with the use and implementation of an architecture based on microservices dockerized and managed with Mesos following the Orchestrator pattern to manage the distributed transactionality inherent to each of the microservices together with a series of steps based on classification algorithms (machine learning), my colleagues and me built this architecture to give the best possible recommendations to the students of the university.

I was in charge of designing and implementing the distributed architecture and my fellow data scientists in the selection of deep learning algorithms and implementation of the different phases for classification.

I am using java, spring-boot, spring-cloud technologies like Eureka, Ribbon, Feign, docker, mesos, kafka, and a distributed postgresql port develop by Stratio.

### REASEARCH AND DEVELOPMENT

Stratio  
Jul 2019 - Jan 2020

In my free time I developed some open source projects, at the same time I was hired by Stratio.

An scalable event-oriented recommendation engines based on apache spark deep learning algorithms, using kafka as an event engine, mongodb as a persistence engine, written in scala and published in GitHub. I started a time ago, with the advice of my fellow data scientist from Stratio, I've given it a few tweaks.  
<https://github.com/alonsoir/awesome-recommendation-engine>  
A proof of concept designed to detect and classify variable stars in stellar images taken by radio telescopes. This type of stars allows you to create a map to create routes in interstellar space.  
<https://github.com/alonsoir/demo-d4j>  
I have also been researching the use of api deeplearning4j for facial recognition.  
<https://github.com/alonsoir/demoFaceRecognition>  
A scalable orchestration-based microservice architecture in order to periodically interrogate the bitcoin queue and make it available for multiple outside requests. I used java, spring-boot, kafka, elastic-search and docker.  
<https://github.com/alonsoir/demo-kafka-elastic>  
<https://github.com/alonsoir/demo-quartz>  
Also I have been working during the end of the year on a project to try to find out the numbers of the euromillions and the primitive, with little success but very useful because it has allowed me to practice with the functional style of the api stream that appeared with the jdk8.  
I have participated in the review of a book on Kafka-Streams of the Pack Publishing house, both the text and the code.  
<https://github.com/alonsoir/KafkaStreaming>.

### BIG DATA ENGINEER

Keedio  
Nov 2016 - May 2017

I have participated in the development and integration of a lambda architecture created for Banco Santander in order to apply a solution imposed by the central banks to these systemic banks too big to fail, Basilea 4.  
The idea is to process multiple sources of unstructured data To finally arrive at a calculation of the credit risk of the bank Santander. For this we need the use of a series of components, such as Apache Flume and Apache Kafka for the raw data intake in avro format in the landing zone of the data lake, then we have a series of engines in charge of the consolidation of the avro files in other format, parquet, which would then be exploited in the form of Hive tables in the integration with the company that is responsible for the exploitation of architecture, enrichment engines, user view creation engines that are also used for a Last phase where we finally create an excel file.  
The technologies used are scala as first language, some of java, hadoop, cloudera, spark, kafka, flume, shell scripts.

My concrete participation in this project was to create a utility to create files parquets, validation, correction in case of error, parts of the api, as a set of works spark to validate quantitatively and qualitatively the architecture delivered. In other words, a method to check that the software is correct, doing the calculations correctly, applying mechanisms designed by the bank, using scala.

I develop too the part of api responsible for making necessary currency conversion, since the solution delivered is designed to be executed generically for all delegations of the Santander bank in the world, sixteen today.

Finally I was also in charge of integrating the software in the place of exploitation chosen by the Bank.

### BIG DATA ENGINEER

Myself/Training  
Feb 2016 - Nov 2016

I have been studying and doing various training courses, like learning scala more seriously with BigDataUniversity, machine learning with Professor Andrew Ng and Apache Spark and hadoop architectures using a formacionhadoop.com course. As a result of that training I have written a couple of projects hosted on github to treat tweets in near real time using apache kafka, apache spark and some nosql databases like mongodb and Cassandra and another project about how to implement machine learning algorithms (ALS) for a recommendation engine. This project uses Apache hadoop and Apache Kafka and apache Spark, both projects are developed using the Scala language.  
<https://github.com/alonsoir/hello-kafka-twitter-scala>  
<https://github.com/alonsoir/cassandra-spark-twitter-scala-app>  
<https://github.com/alonsoir/awesome-recommendation-engine>

### BIG DATA ARCHITECT

Synergic Partners  
Nov 2015 - Feb 2016

My task is to design big data architectures for different clients of Telefonía and synergic partners alone.  
I have participated in the initial proposal for Santander and OpenBank developing a book for them, and another proposal for a local newspaper, La Vanguardia, as well as maintaining the training cluster we have in the company.  
The cluster is handled with Cloudera Manager. I am learning scala and big data programming skills with BigDataUniversity.com in my free time.

### BIG DATA ENGINEER

Tektronix  
Sep 2014 - Jun 2015

A BigData project related to the field of telecommunications. The final goal of the project is to show on a map the incidents in real time based on telecommunications optical fiber of a big city.  
I design a tool similar to Flume for doing ETL tasks from different locations and source files, a tool similar to SQOOP for doing ETL from different SQL engines, and a tool designed to manage the orderly and coordinated invocation of the different components of the architecture, in which there are phases in which Apache Spark is used to calculate the noise in each of the layers of the tree.  
The related technologies are Java7, apache spark,Apache Camel, Apache Impala, Hadoop, Spark, maven, postgresql and GNU/ linux.

### BIG DATA ENGINEER

Myself/Training  
Jan 2014 - Jul 2014

I have developed a some proofs of concepts related with map reduce task with the data provided by datos.gob.es and Facebook data.  
Another project related with how to get real time data on a web browser using web sockets, spring integration, rabbitmq with stomp support, httpm5 and jquery. The purpose of this proof of concept is to know where are the different buses of Dublin city, so that every person can see the bus in a map provided by google maps.

I made another project, with mongodb, spring mvc, rabbitmq broker message with stomp support and a bit of html5, jquery and css3. The purpose of this project is to save different events provided by a user.  
I started my own tech blog, aironman2k.wordpress.com and I started to learn Apache Spark, with cloudera, how to use it with other technologies like apache kafka, apache flume, mongodb.

I did some courses from BigDataUniversity.com.

### SOFTWARE ENGINEER

Naevatec/Kurento  
Aug 2013 - Jan 2014

I developed the core of a set of restful web services for a whatsapp type service, also I had to develop a couple of Controllers using IOS and XCOCODE. The technology was a mix of j2ee 1.7, spring, hibernate and bouncy castle for the java core and objective C and Xcode for the iOS app. The core is an implementation of the command pattern over a set of RESTFUL web services implemented with spring MVC. The service is deployed and ready to use for the Hospital Nino Jesus from Madrid [http://www.madrid.org/cs/Satellite?pagename=HospitalNinoJesus/Page/HNIJ\\_home](http://www.madrid.org/cs/Satellite?pagename=HospitalNinoJesus/Page/HNIJ_home)

### PARTNER AND CTO

Jorge Calvo Law office  
Jan 2013 - Aug 2013

I developed a project for industrialize the process of creating demand on payment arrears with delinquent tenants of a neighboring community or rural. I used openxava framework.

### CEO/CTO

SmartBuyer  
Jul 2011 - Dec 2011

I built an IOS5 based application that makes heavy use of geo-location and consumption of Web services. After I finished developing the application, I decided to create a complete solution that allows businesses to buy products at a physical store using the smartphone's camera to read barcodes and Web services on the server. On the server side, the technologies used on the implementation were - apache CXF RESTful web services, JSON and / or XML as a mechanism for exchange of information, HashMaps competing for a cache in which to save the customer information, items to sale and the accounting entries from the sale of items, - a thread engine to launch the consultation request and / or updates on the map, hibernate as a persistence and MYSQL as an engine for data persistence. I have pending to upgrade the system with a NON SQL connector like spring-data project.

### SOFTWARE ENGINEER

ATISistemas/Ocaso Insurance  
Jan 2011 - Jun 2011

I implemented operational functionality, such as Research Records, Dispatch management legal advice...  
The technology used is Spring MVC, ajax, hibernate, Rational, Websphere 7, Jquery, prototype, VIAS7, jdk1.6, Clear CaseNovember 2010 March 2011The client was the Ministry of Justice, Government of Spain and the task was to develop the electronic apostille. I used a framework based at the ministry's own Spring MVC. Spring WebFlow, hibernate, ajax and use of caches, specifically EHCACHE.

### SOFTWARE ENGINEER

ATISistemas/ING  
Sep 2010 - Dec 2010

My job was to tune and customize Alfresco Community Edition in a production environment so that the client could store their web pages, could auto deploy if system crash. This feature does not have the community version and asked me to devise a solution that would allow.  
The solution was a mixture of bash shell scripts, Cron and modification from sources project from Alfresco.

### SOFTWARE ENGINEER

ATISistemas/Peugeot  
Jan 2010 - Aug 2010

My job was to design and implement a range of business services related to how quality management is performed at their factories. The project involved drafting a quality report indicating weak points and strong points of the architecture. Technology used - Spring framework, namely SpringJDBC for the persistence layer, j2ee services that have injected the damages.  
I also designed and implemented a concurrent and distributed cache adapted to customer needs, based on the use of ConcurrentHashMap class, threads iterating over this cache and implementation Sun's Java Message Services to let persistency over the data.  
(To perform the quality and performance report I relied on the use of the tools Google Page Speed and Yslow.)

### SOFTWARE ENGINEER

Alten/SES  
Oct 2009 - Jan 2010

A project for the Department of Health and dependence to define a development framework that would meet the needs of all stakeholders in development teams. The project took off as madas, is based on a framework of the Junta de Andalucia.  
<http://www.juntadeandalucia.es/swiki/bin/view/MADEJA/>

### SYSTEMS ENGINEER

Alten/L'oreal  
Mar 2009 - May 2009

I performed the installation and configuration of about 80 machines with their OS and office suites, as well as individual configuration.

### SOFTWARE ENGINEER

CECA  
Jan 2009 - Mar 2009

I conducted safety audits of electronic banking software that is being implemented in the savings banks, using JMeter and JProbe to detect memory leak problems as well as performance issues

### SOFTWARE ENGINEER

Alten/Fogasa  
Nov 2008 - Dec 2008

Telematic project for a Wage Warranty Fund.  
Collaborate on product integration functionality by adding a series of web services that provide electronic signature with national manufactures coin and stamp. FNMT  
<http://www.fnmt.es/>

### SOFTWARE ENGINEER

Alten/Telefonica  
May 2008 - Nov 2008

Technology consultant, research and development, testing, technical leadership.  
Project e-marketplace Telefonica R & D. In this project I work as a consultant, especially much R & D. To design and implement an SOA architecture based on Java, learned to handle the java api and Websphere Service Registry (WSRR) from IBM, as well as its management interface, web services Java, mixed with different access databases, in addition to better knowledge of English because I had to work closely with IBM consultants foreigners.

### SOFTWARE ENGINEER.

Alten/Yell/ Spain  
Aug 2007 - Aug 2008

Consultant, Developer, R&D.  
Implementation of several J2EE-based SOA architectures for use in a new version of the website of the yellow pages and white pages.  
[www.paginasamarillas.es](http://www.paginasamarillas.es)  
R & D / Enhancements and features.

### SOFTWARE ENGINEER

Indra/AVIVA  
Nov 2006 - Jul 2007

Developer, R&D and testing.  
Builder project / Implementation of maintenance of proprietary architecture based on Andromda technology  
<http://galaxy.andromda.org/>  
In this project I work on technical design and implementation of a number of cases of end user applications for AVIVA, assurance business  
HYPERLINK  
"http://www.aviva.es/es/corporativa" "http://www.aviva.es/es/corporativa/  
Indra software labs, Badajoz, Badajoz, Spain.

### SOFTWARE ENGINEER

Indra/Red Eléctrica de España  
Oct 2006 - Nov 2006

Developer, testing.  
REE-ARAP Project (Spanish Electricity Network)  
<http://www.ree.es/>  
Users Maintenance DIRA integrated proprietary system.  
Indra software labs, Badajoz, Badajoz, Spain.

### SOFTWARE ENGINEER

Indra/AMAEF  
Jun 2006 - Oct 2006

Develop with Indra a solution for banking and insurance could communicate with each other. Intensive use of web services and caching resources with a good class design using patterns like singleton, single sign on, facade, aggregation, data access object  
Indra software labs, Badajoz, Badajoz, Spain.  
<http://www.amaef.es/>

### SOFTWARE ENGINEER

Indra  
May 2006 - Jun 2006

R & D in Java Server Faces, Java Studio Creator 2, we made a port of a use case VFINCA a JSF project.

### SOFTWARE ENGINEER

Indra  
Feb 2006 - May 2006

VFINCA Project, Securities and investment funds.  
Data base admin, J2EE coder.

### SOFTWARE ENGINEER

Telium/IbermutuaMur  
Oct 2005 - Jan 2006

Analyst, Developer.  
IB Training Project: System user multi user management  
And Ibermutua customers. <http://www.ibermutuamur.es/>  
medical assurance.

### SOFTWARE ENGINEER

Siconet/MAPFRE  
Mar 2005 - Oct 2005

Programmer Analyst Jr  
Project ST-CAT (Work System for Territorial Administrative Centres).  
Multi-entity for the management and treatment of collections at offices and workplaces across the national network of Mapfre Mutual.  
Development and design too.  
Technologies: Java/J2EE, JSP, JDBC, Servlets, JavaBeans, EJB, XML, XSL, Eclipse, WSAD, UML, Architecture mapfre version 2.

### SOFTWARE ENGINEER

Area 10  
Sep 2004 - Feb 2005

Developer  
Development of a range of applications in visual basic 6 with their design of databases on Access2k: a complete application for inventory control and another to consult on the set of distance learning centers throughout Spain.  
Application Development in Visual C++ . The first data to insert that came home in q19 format and insert them into a DB in Access 2k and other MySQL DB. The other application was to extract data from the databases and generate a q19. Maintenance and expansion of the website  
"http://www.area10.es/" www.area10.es, developed with php, html, css, javascript and mysql.



## EDUCATION

2004

### INGENIERIA TÉCNICA INFORMÁTICA DE SISTEMAS

Polytechnic School of Cáceres, Cáceres, Spain

- Masters Java/J2EE-Oracle-XML (352 hours) Finished
- Specialized Coursework Advanced Java Programming Course (42 hours),
- Web Services Programming Course (94 hours), IOS 5 course (90 hours),PHP, JAVASCRIPT, HTML (750 hours),
- Introduction to MapReduce Programming, with Glen Mules and Warren Pettit, BigDataUniversity.com (40 hours),
- Hadoop Fundamentals 1 - Version 2 with Keith McDonald, Akmal B. Chaudhri, Bradley Steinfeld, Carlos Renteria,
- BigDataUniversity.com ((40 hours)), Stream Computing 1, with Martin Siegenthaler, Robert Uleman, Anjali Agarwal, Rachit Arora,
- BigDataUniversity.com. (40 hours), Introduction to Scala, with Jamie Allen, BigDataUniversity.com (40 hours),
- Machine Learning Course, from Andrew Ng, Stanford College, Coursera.org (480 hours) Not finished yet.
- Master Big Data Expert, from Fernando Agudo Tarancon, formacionhadoop.com (150 hours) Finished
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2004

### TEXT AND CODE REVIEWER OF A BOOK ON KAFKA STREAM FOR PRACT PUBLISHING. PENDING RELEASE.

Oct 2019 - Jan 2020

I reviewed the code and text of some chapters on how to stream with Kafka, Flink, Spark Streaming, as well as KafkaStreams. I added notes, improved the text, fixed the source code among other tasks. Very instructive task, I loved it, really.