

Salvatore Zaza

Curriculum Vitae

Profile

As a passionate software engineer, I developed strong technical and computing skills as well as responsibility and teamwork attitude. While graduating from the Siena University, I undertook internships and courses to broaden my training and pursue my interests in science, technology and information techniques. Personal projects, and achievements from my recent CERN Technical Student appointment, prove my strong experience with web standards and frameworks and distributed computing.

Currently I am employed at TIND Techonologies where I am really proud to bring my knowledge and skills as full-stack developer and Elasticsearch expert.

Key skills: **Python, Elasticsearch, PHP, SQL, Javascript, version control (Git)**

Education

2013 **Bachelor's Degree in Physics and Advanced Technologies**, *University of Siena*.

Supervisor: Prof. Dr. Riccardo Paoletti

Thesis: *Sampling electronics for the new camera of the SST telescope of the CTA experiment*
Characterisation of a data sampling system based on the TARGETv5 chip, developed to read data from silicon photo-multipliers. Development of a Graphical User Interface (GUI) managing both hardware configuration and data acquisition and analysis. Main tools used: ROOT, **Python**, PyQT and PyROOT, **Qt4**, **C++**, UDP protocol, TINA (a SPICE-based analog circuit simulation program by Texas Instruments).

2000 **Diploma**, *ITIS E. Medi (Technical College)*, San Giorgio a Cremano (Italy).

Projects and work experience

in LinkedIn [linkedin.com/in/salvatore-zaza](https://www.linkedin.com/in/salvatore-zaza)

GitHub github.com/zazasa

Aug 2016-Today **Full Stack Software Developer**, *TIND*, Oslo (NO).

@TIND I am working on an highly customized Invenio-based software, used by different kind of customer mainly institutional repositories and libraries.

We have two working places: the main in Oslo, and a secondary sited at CERN in Geneva in order to keep a fruitful collaboration with the official Invenio developer team. Currently I work remotely for 70% of my time, while I am located in the Oslo office for the remaining.

I work together with a small team (about 5 developers) with different nationality (English, French, Nowegian) using a **Scrum** agile framework.

The software is coded mainly in python with different Javascript libraries for the front-end (ReactJS and AngularJS included).

My biggest achievement was the replacement of the old existing search engine with a modern one based on **Elasticsearch**.

Follows the list of the main technologies used:

- o **Python** and **Javascript** are the main programming languages;
- o **Elasticsearch**, postreSQL, MySQL, Redis, as data archive;
- o Rancher and Docker as development and deployment tools;
- o Jinja, jQuery, AngularJS, ReactJS for the front-end;
- o Webex, Slack, Jira for project management and remote communication.
- o Amazon AWS is the main provider of services for the cloud computing.

- Feb 2014–Mar 2015 **Technical Student**, *CERN*, Geneva (CH).
I developed a monitoring system for the High Level Trigger of the CMS experiment. During the appointment, I achieved the following results:
- developing a **Java** plugin for **Elasticsearch** (ES) aimed at decoupling end-user queries from the normal monitoring workload;
 - implementing a **Python** data collecting daemon, using ES to manage output from the CMS High Level Trigger (HLT) monitoring processes;
 - designing a web page, in use at the CMS Control Room, to aggregate reports and visually monitor the HLT farm operation. I used **Angular.js**, **Bootstrap** and **PHP**.
- 2011–2012 **Personal project: weather monitoring interface**, *in use at the Physics Department, University of Siena*, Siena (IT).
I created a web interface for weather monitoring on behalf of the Astronomical Observatory at the Physics Department of the University of Siena. I used the following tools:
- a **MySQL** database to store data streaming from an outdoors weather station;
 - **Python** and the Qt4 libraries to collect and handle data through a graphical interface;
 - HTML, **PHP**, **JavaScript**, JQuery and JQuery UI to display reports on a web page.
- 2008–2012 **Assistant manager**, *ZetaPi S.r.l.*, Naples (IT).
Part-time work for my family building firm. I **coordinated** the work of outsourced resources, and supervised repair and maintenance projects, while also managing logistical, commercial and legal aspects.
- 2004–2006 **Software Engineer**, *Novartis Vaccines and Diagnostics Srl*, Siena (IT).
Administration and customization of **Labware LIMS**, an Oracle-based database managing software used to store Quality Assurance data from analysis laboratories, vaccines production, and environmental monitoring. Development of software plugins, **SQL** statements, views and stored procedures; report design with the **Crystal Report** software.
- 2011 **IT Technician**, *IT Partner Italia S.r.l.*, Florence (IT).
2004 **IT Engineer**, *Core Informatica S.r.l.*, Ivrea, Torino (IT).
2003 **IT Engineer**, *Getronics S.p.a.*, Siena (IT).
2002 **IT Engineer**, *Coopersystem S.c.r.l.*, Bagno a Ripoli, Florence (IT).

Internships and further education

- 2008–2011 **Apprenticeship at the Astronomical Observatory**, *Department of Physics of the University of Siena*, Siena (IT).
Acquisition, calibration and photometric analysis of CCD images from various astrophysical objects to extract light curves in order to assess and verify their characteristics. I also contributed to several educational events for students and the general public and held a seminar presentation titled “PHEMU: PHENomena of MUTual interaction between Jupiter satellites” at the Santa Maria della Scala museum in Siena.
- 2011 **Network Theory and Complexity**, *University of Siena*, cycle of lectures.
2010 **EXOWORKSHOP**, *University of Siena*, workshop about extrasolar planets.
2009 **Econophysics**, *Scuola Superiore Santa Chiara and University of Siena*, Multidisciplinary program “*Physics and Complex Systems*” (10 lectures by Prof. R. Mantegna).
2001 **Stage on RDBMS Oracle**, *Medialine S.r.l.*, Casandrino, Naples (IT).
2001 **Stage on LAN Planning with Windows NT and Linux systems**, *Teletron S.r.l.*, Casandrino, Naples (IT).
2001 **Stage on Network Planning and eCommerce Web Development**, *INCO Service S.r.l.*, Naples (IT).

Languages

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| Italian | Mother tongue | |
| English | Good working knowledge | <i>Council of Europe level B1 certificate (2013)</i> |

Summary of technical/computing skills

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|-------------------|---|-------------------------------|
| Operating Systems | Windows, Linux | |
| Programming | Python, PHP, HTML, JavaScript, SQL, Flask, Django | <i>Professional knowledge</i> |
| | Assembler, Pascal, Java, C, C++, Bash shell | <i>Good knowledge</i> |
| Toolkits | Highcharts (JS), QT, JQuery UI, Jinja, ReactJS, AngularJS | |
| Data managing | Elasticsearch, MySQL, Oracle | |
| Cloud computing | Amazon AWS, Redis, Rancher | |
| Data analysis | ROOT framework, Crystal Report | |
| IT | Assembly, maintenance and management of personal computers, minimal Linux-based servers (Apache, MySQL, Courier Mail Server) and LAN networks | |
| Electronics | VHDL language, Quartus, LabVIEW, design of analog and digital circuits | |
| | Integrated circuits (Altera Flex FPGA) and microcontrollers (PIC) programming | |
| Calculus | Wolfram Mathematica, Matlab/Octave | |
| Astrophysics | MaxImDL, PerAnSo, use of telescopes, CCDs and filters | |

References

Audun Bjørkøy. CTO at TIND Technologies. audun@tind.io

Dr. Emilio Meschi. CERN. emilio.meschi@cern.ch

Prof. Dr. Riccardo Paoletti. INFN Pisa. riccardo.paoletti@pi.infn.it

Dr. Walter Bagni. Global MES Application Manager, Novartis Pharma AG. walter.bagni@novartis.com