

# Diego Russo

Software Engineer

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"Now is better than never" - The Zen of Python

## Desired employment

I'm always looking for a challenging position where I can express and use my passion for programming and technology. I mostly develop in Python in \*NIX environment on a daily basis. As I'm a dynamic person, professional and personal growth are very important to me.

## Experience

### Vocational

- 2013/11–Current Position** **Staff Software Engineer in DSG (Development Solutions Group), ARM Ltd, <http://www.arm.com/>, Cambridge.**  
Working in the **GNU** team, our goal is the delivery of the **GNU toolchain** (*ld, newlib, binutils, gas, gcc, libffi, g++, gfortran, libgomp, libstdc++*) optimized for ARM processors. I am responsible of the infrastructure for automatic builds, tests and benchmarks. It is a bespoke solution written entirely in **Python** that automatizes all the phases of the process: checkout of the code (using **GIT**), build and systematic tests (**DejaGnu**) through **LSF** (Load Sharing Facility). I am developing an application that collects all the tests' outcome and stores them into a database (**MongoDB**). I am also designing for analysing those data to find error root causes, trends, common patterns and automatising the tracking of errors using **JIRA**. For this task I am using **Flask** for APIs, **Bootstrap** and **AngularJS** for the frontend side. The plan for the future is to integrate also benchmarks into the build system (*CoreMark, Dhrystone, Spec2K*)
- 2011/10–2013/10** **Senior Software Developer in Engineering IT Department, ARM Ltd, <http://www.arm.com/>, Cambridge.**  
Working in a team, I'm involved in many internal projects using **CentOS** and mainly the following languages: **Python, Java, Perl, C, tcsh and bash**. I developed from scratch a reliable and fault tolerant application that interacts with the cluster (**LSF**) and a AMQ server (**RabbitMQ**). For this project the main language has been Python using a NOSQL database (**MongoDB** configured as *ReplicaSet*). I've also developed a **JIRA** plugin to interact with an internal software in order to synchronise external tickets with internal ones. I look after, improve and fix many IT internal software using a wide range of languages. I've got experience also with **LSF** cluster, customizing deeply its behaviour in order to provide a functional solution to our customer. Other minor projects are related to **SVN hooks**, **FlexNet Manager** server, **LSF monitor**, internal application interacting with distributed storage. With a colleague of mine, I'm running the IT ECS (*Early Career Scheme*), managing all the phases from the CV sifting to the early career in ARM of graduates and interns.
- 2006/12–2008/08** **Python/Django Programmer, Consorzio Miles - Servizi Integrati, Rome, Assisi.**  
**2009/09–2011/09** Working in a team, I developed a management application for the municipality of Bettona using Django, Python, PostgreSQL, Linux, Apache, for the **computerization of services**, the management of personal data, building practices, urban planning, calculation of ICI tax and updating of land registry data. Also I created an advanced web interface for sending proposed practices, on-line services conference, integration process, exploration of cadastral map in **DXF** and production of customized automated printing. During the project I used revision control systems (**SVN/GIT**) with related web interface (**trac**) to manage tickets.
- 2011/05–2011/06** **Objective-C Programmer, Forinicom Srl, Bastia Umbra, <http://www.com-com.it>, Assisi.**  
Developed an iPhone application that permit you to auto-login into ComCom Hotspot. This application is used by the attendees in the Europython Conference 2011 in Florence.

- 2008/04–2011/02 **Programmer and System Engineer in Research and Development Department, Forinicom Srl**, <http://www.com-com.it>, Bastia Umbra.  
Working in a research and development team to create an innovative and unique product in the wireless communications market (WiFi). I initially worked on **embedded systems** (ubnt, alix, pcengines), customizing the operating system (ubnt, openwrt) and the software to manage authentication (hostapd, wpa-supPLICANT). After this first phase, I focused on the software **to flash** these devices and on large-scale production software. Also, we developed a complete solution for managing **hotspots**: I worked on server-side development to manage authentication, sessions log, signups, signals management from remote devices, integration with our management software, payment via credit card and authentication via SMS, complying with Pisanu law. My final task was to create software for network monitoring. It is a **PyQT stand-alone** application, using internal django based API. The technologies mostly used are Python/Django with PostgreSQL database on Debian OS virtualized on XEN
- 2010/11–2011/01 **Python/Django Programmer, Exion Sagl, Manno, Switzerland**, <http://www.exion.ch/>, Assisi, remotely.  
Setting up an **Adult WebTV** entirely developed in Python/Django with PostgreSQL database on Linux/Apache platform and Red5 as streaming server. The work is managed independently using GIT as revision control system.
- 2010/10–2011/01 **Python/Pylons Programmer, Sauce Labs Inc, San Francisco, California, USA**, <http://saucelabs.com/>, Assisi, remotely.  
Implementing new features, bug fixing, structural changes to the site of Sauce Labs. Distance work coordination. Site is developed in Python/Pylons using [github.com](https://github.com) as revision control system platform.

### Miscellaneous

- Since 2013/06 **Staff Software Engineer, Opentaste Ltd** <http://www.opentaste.eu>, London, remotely.  
Working part-time, I am part of a distributed team of 15-20 people across the globe (San Francisco, Italy, Australia). My main tasks are technical counselor and code reviewer. Opentaste is entirely written in **Python** using **Flask** as web framework and **MongoDB** as database. Communication is crucial and we do organise regular hangouts to discuss about plans, issues and tasks. We are using **github** and **Google Docs** for managing our work
- 2011/06 **Teaching - Advanced computer course, Centro Studi Città di Foligno**, <http://www.cstudifoligno.it/>.  
Taught a class of 10 people the existence of the open source world, installing open source software on Windows and then proceed to install Ubuntu on their laptop.
- 2011/01–2011/06 **Trainee - iPhone and iPad development, University of Perugia, Computer Science department**, <http://informatica.unipg.it>, Assisi.  
Following lessons of Stanford University, I trained myself to Objective-C and iPhone world, developing small applications. As final project I customized a VOIP application for iPhone based on Linphone (<http://www.linphone.org/>).
- 2005/11–2006/05 **Trainee - S.E.O. Search Engine Optimization, WEDOIT sas**, <http://www.wedoit.us>, Assisi.  
Working in a team I acquired knowledge of S.E.O. and its behavior. The internship included S.E.O. optimization of various websites, using *pagerank* and *link popularity* methods. Also I worked as a system engineer of Debian-based virtualized server and I developed a S.E.O. oriented application in Python and PHP.
- 2002/02 **Trainee combined with IFS project, Impresa Formativa Simulata (Enterprise Training Simulation), IOSA CARLO Srl**, <http://www.iosacarlo.com>, Terni.  
Administration of enterprise network

## Education and Trainings

- Since 2010/10 **Specialization course, with mayor in Computer Science, "Security", University of Perugia, Computer Science department**, <http://informatica.unipg.it>, Enrolled.  
Passed following exams with excellent mark: Simulation, Advanced programming and Lab, Advanced Operating Systems and Lab, Theoretical Computer Science, Computer Security, Advanced Databases and Data Mining, Law Applied to Computer Science and Communications.
- 2014/01–2014/03 **Cryptography 1, Coursera, Online - Cambridge, UK**, Final score: **PASSED**.  
Topics covered in the course: semantic security, block ciphers and pseudorandom functions, DES/AES block ciphers, message integrity, collision resistant hashing, authenticated encryption, Diffie-Hellman, RSA, and Merkle puzzles, public key encryption, the ElGamal system (<http://bit.ly/coursera-cryptol>)
- 2013/09 **ITIL Foundation, ILX Group, Cambridge, UK**, Foundation Score: **31 out of 40, PASSED**.  
The skills achieved are all included in (<http://bit.ly/itil-foundation>)

- 2013/10–2014/01 **Brazilian Portuguese Course, Private Classes, Cambridge, UK, B1 level.**  
The skills achieved are all included in **Common European Framework of Reference for Languages**<sup>1</sup>
- 2011/06 2012/07 2013/07 **Europython Conference, Volunteer, Attendee, Florence, Italy.**  
I volunteered in the 2011 edition and attended the 2012 and 2013 editions. Europython represents my annual appointment with Python world as it is source ideas, talks, trainings that keep me updated with the latest technologies around Python which I can apply to my day to day job.
- 2013/04–2013/06 **Advanced English Course, Sixth Form College, Cambridge, UK, CEF level C1-C2.**  
The skills achieved are all included in **Common European Framework of Reference for Languages**<sup>1</sup>
- 2012/05–2012/06 **Brazilian Portuguese Course, Sixth Form College, Cambridge, UK, A2 level.**  
2012/10–2012/11 The skills achieved are all included in **Common European Framework of Reference for Languages**<sup>1</sup>  
2013/01–2013/02
- 2010/10–2011/05 **English Course, Comprehensive School "Volumnio" Ponte San Giovanni, Perugia, B1 level.**  
The skills achieved are all included in **Common European Framework of Reference for Languages**<sup>1</sup>
- 2009/10–2010/05 **Spanish Course, Comprehensive School "Volumnio" Ponte San Giovanni, Perugia, B1 level.**  
The skills achieved are all included in **Common European Framework of Reference for Languages**<sup>1</sup>
- 2009/08–2010/03 **Paper publication [1], University of Perugia, Computer Science department, <http://informatica.unipg.it>.**  
Preparation and publication of "The AES implementation based on OpenCL for multi/many core architecture" paper for the yearly conference ICCSA 2010 ([www.iccsa.org](http://www.iccsa.org)) at Sangyo University, Fukuoka in Japan. The paper discussed the implementation of an AES algorithm that runs on NVIDIA/ATI graphics card.
- 2007/02–2007/07 **Radio-amateur class A license, C.I.S.A.R. Foligno's section, PASSED, International Callsign IZ0OVB.**  
During the course for radio-amateur I acquired excellent knowledge of radio technology basics, radio devices and its usage and basics of Physics and Chemistry (magnetism, elettromagnetism)
- 2007/03 **Spanish Course, Inhispania Intnlance S.L, <http://www.inhispania.com>, Madrid, Spain, A2 Level.**  
During the time in Madrid, I studied Spanish grammar and general Spanish culture.
- 2006/12 **ISO certifications course, WEDOIT sas, <http://www.wedoit.us>, Assisi.**  
Training course on security and ISO certifications, covering ISO 27001:2005, policy for Information Security, Risks Analysis (RA), analysis of controls of ISO 17799:2005, Risk Transfer Process (RTP), certification process, overview of existing certification audits, audit plan and checklist, audit report, a look at future certifications.
- 2002/10–2006/11 **Bachelor Degree in Computer Science, University of Perugia, Computer Science department, <http://informatica.unipg.it>, 102/110.**  
Computer science Bachelor Degree, mayor "Network": Mathematics (analytical and discrete), Programming (C, Java, Php, html, xml, xsl, dtd, Pascal, scripting bash and csh, VB.NET, VRML), Databases (Mysql, MS Access and related programming language), Networks (ATM, xDSL, Mpls, X.25, Frame Relay) types (wireless, wired) and interaction between them, Knowledge of multimedia system, overview of parallel computing (mpi)
- 1996/09–2002/06 **Accountant programmer Diploma (Mercurio project), Ministry of Public Education - I.T.C. (Commercial technical institute) "Federico Cesi", Terni, 85/100.**  
Matters covered by the course (Commercial technical institute) of study as defined by the Ministry of Public Education: Chemistry / Physics, Mathematics and Computer Laboratory, Natural Science, Word processing and data, Second foreign language (French), Law and Economics, Business, Economics and Financial Science, Italian Language and Literature, History, Computer Management, Applied Mathematics, First foreign language (English), Law.
- 2001–2002 **National Project IFS (Enterprise Training Simulation, Ministry of Public Education - I.T.C. (Commercial technical institute) "Federico Cesi", Terni, Certificate of attendance.**  
Simulation of waste disposal firm, backed by Iosa Carlo S.r.l. (<http://www.iosacarlo.com>). Within the project I coordinated the work of all students, building the simulated organization chart and programming the website.

## Bachelor Thesis

title *Wireless Broadband Network - Weconnect project (2006/07–2006/12)*  
supervisors Simone Brunozzi, Sergio Tasso

<sup>1</sup>[http://en.wikipedia.org/wiki/Common\\_European\\_Framework\\_of\\_Reference\\_for\\_Languages](http://en.wikipedia.org/wiki/Common_European_Framework_of_Reference_for_Languages)

description The thesis was to develop a WiFi network in order to coverage **digital-divide** areas. Thanks to this project, I acquired a wide knowledge about WiFi networks and their behavior, legislation that governs the operation, RouterOS operating system ([www.mikrotik.com](http://www.mikrotik.com)), AAA protocol and Radius server. Finally I administered a server for the provision of various network services: mail (Postfix), web server (Apache), DNS (pdns), firewall (iptables), database (PostgreSQL), hotspot (Chillispot), Debian OS, Voyage (OS for embedded Debian based system).

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## Languages

|                 |                      |
|-----------------|----------------------|
| Italian         | <b>Mother tongue</b> |
| English         | <b>C1 level</b>      |
| Spanish         | <b>C1 level</b>      |
| Portuguese (BR) | <b>B1 level</b>      |

*Preliminary English Test (PET), 2011/05*

*Diploma de Español como Lengua Extranjera (D.E.L.E.), 2010/05*

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## Computer skills

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| Programming, Scripting, Markup Languages | <b>Python</b> , sh, Javascript, <code>css</code> , bash, HTML, <b>Perl</b> , <code>xml</code> , SQL, JSON, LSL (Linden Scripting Language), <b>Java</b> , C, Objective-C, PHP, LaTeX |
| Frameworks                               | Django, Flask, JQuery, Nokia Qt4, Pylons   |
| Operating Systems                        | Linux (Debian based, CentOS), Unix, OSX, XEN and Virtualization, OpenWRT, Ubnt ( <a href="http://www.ubnt.com/">http://www.ubnt.com/</a> ), Microsoft Windows                        |
| IDEs                                     | Vim (it's not a real IDE), Eclipse, TextMate, XCode  |
| Databases                                | PostgreSQL, MongoDB, Redis, MySQL, SQLite, CouchDB   |

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## Interests

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|------------|--|
| Languages  | I've learned Spanish by myself. At the moment I speak English, Spanish, Italian and Portuguese. My personal target: <b>5 languages by 2015</b> . I have interest in Esperanto as well. |
| Technology | Attracted by all things that have a processor  |
| Photos     | Amateur photos, I own a reflex camera  |
| Music      | Hobby level. I played piano and guitar and I love to listen to any genre, from salsa to metal  |
| Studies    | Willing to learn and study   |
| Science    | Attraction for science in general  |
| Curious    | That's how I define myself   |
| Sports     | Cuban Salsa dancing, Squash. Past: Capoeira, Kungfu, Swimming  |
| Puzzles    | I love any kind of puzzle and I'm very passionate about Rubik's cubes: size solved 2x2x2, 3x3x3, 4x4x4, 5x5x5, 6x6x6 and 9x9x9   |

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## Licence(s)

- o Driving license type B.
- o Operator license for amateur radio station class A (nr. 020122/AN), International callsign **IZ0OVB**

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## Extra Information

- o BCS member (<http://www.bcs.org>)
- o comply with compulsory military service (referring to studies)
- o Linux Registered User #399008
- o AVIS (Blood Donor Italian Association) ordinary member
- o marital status: single

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## Publications

- [1] Osvaldo Gervasi Diego Russo, Flavio Vella. The aes implementation based on openssl for multi/many core architecture, 2009.

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## About me

Because of **my passion for computing**, I have developed over the years a wide range of skills many areas computer-related.

During the years of higher education, beyond academic success, I created and maintained an **above average** extra-curricular activity: among other initiatives in which I participated, I remember "The basic course on multimedia", "Exposcuola 2000 in Paestum", "Basic computer as tutor role", "Computer literacy course as tutor to senior people (over 65 years old)", "XI week of scientific and technological culture", "Pluto Meeting 2001" and "Main tutor of a group of 6 people for the course of IMPROVING ITALIAN for new students in the project "Reception, Recovery, Empowerment in early grades"". In all the projects mentioned, I participated actively devoting time and effort in learning new things about new information technology and other subjects.

From the moment I had my first computer, I have had a certain passion for the **open source** world and all that concerns it: in fact I have managed machines with **Linux** distributions such as RedHat 7.3, Slackware 7.1 up to machines to Debian (from version 3.0 to current ones). Through this experience I have gained skill and knowledge in the management of Linux: bash scripting, configuring and compiling the kernel, network services, patching the kernel, C language. In addition to Linux, I daily use OSX.

I was active as a contributor to the writing of the guide <http://www.ubuntusemplice.org/> (version 6.06 and 7.10). On this project I was the reviewer and author of several chapters, I administered the machine that hosts the site, wiki, blog and mailing list.

**I also have a great passion for programming languages** knowing many of them. I studied LSL during my work on **Second Life**: in fact I have worked on many Italian metaverse project such as Assis <http://www.secundavita.it>, Milan and Marostica on the "**Italia Vera**" project.

I have a good knowledge of graphic applications (Gimp, Photoshop) and office tools such as Openoffice.org and iWork (for OSX)

Determined, I can work both in a team and individually and I am able to independently manage my workflow. Working usually in a team, I have a constructive and collaborative relationships with the people around me. I am sociable, friendly and with good communication skills; my site is a source of continuing social contact and exchange with other technical and less technical people.