Francesco de Virgilio ~

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GITHUB   github.com/fradeve

PROFILE

Result-driven Agile Python developer, passionate about maps, geography, and RESTful services, with a deep understanding of Open Source GIS development tools and an active interest in scientific Python. Full-stack wannabe and FOSS evangelist. Loves doing show–and–tell, slides and documentation. Deeply involved in the OpenStreetMap, ArchLinux and Ubuntu projects both as an active user and as developer for business, community and personal projects since 2007.

WORK EXPERIENCE

References available on request

JUL 2015 — CURRENT

Senior Software Engineer — POLE STAR SPACE APPLICATIONS LTD, LONDON, UNITED KINGDOM

- written, monitored and delivered a RESTful API ecosystem of connected services to process 4+ millions monthly real-time positions
- engineered and implemented geospatial infrastructure solutions for global maritime satellite tracking software (Python, Django, PostGIS, MongoDB, GeoServer, Celery, RabbitMQ, Docker)
- planned and delivered integration of legacy products with the new ecosystem, with full cross-team support offered (development, sales, customer support)
- engineered and implemented BDD API testing

MAY 2014 — JUL 2015

Software Developer — POLE STAR SPACE APPLICATIONS LTD, LONDON, UNITED KINGDOM

- core business API service developed from scratch: Django, PostGIS, MongoDB, Celery, RabbitMQ; 30+ endpoints, custom auth, mission-critical targets
- WeatherAPI: fast parser to extract weather forecasts from industry-standard compressed binary files, with RESTful API access, needed to distribute forecasts in near real-time (Django, SciPy)
- MessageAPI: API component to send 8+ millions email, SMS, fax, telex messages to customers, with status checking and real-time efficiency needed
- frontend development (ExtJS, OpenLayers, Leaflet)

OCT 2013 — NOV 2013

Intern; Python and GIS developer — L. – P. HERITAGE LLC, LONDON, UNITED KINGDOM

- developed a Django app to automate cleaning, calculations and customizable plots of geographical data (Python/GeoDjango, SpatiaLite, Leaflet) from shapefiles
- developed backend/frontend tools to create a geoJSON REST APIs from MySQL database and shapefiles (Django, Twitter Bootstrap, MapServer)
- created a basic statistical system to extract meanings from archaeological databases (Python, ReclineJS, R)

JUN 2011 — JUL 2013

Co-founder, webGIS developer, system administrator — OPEN IDEAS FOR ARCHAEOLOGY, BARI, ITALY
Science and open source technologies for cultural heritage management

- developed systems to manage archaeological geospatial data (LAMP, Python, GRASS GIS, PostGIS, ARK)
- developed interactive webGIS based on PostGIS, MySQL, Leaflet
- responsible of a team of 3 people for the digitalization and data migration of 10 years of archives to digital and standard compliant format
- 3D technologies consultant during a campaign for archaeological objects reproduction, using MeshLab and laser-scanning techniques
- GNU/Linux system administrator
- ensured the security of the softwares and the network traffic using fakeroot and Iptables firewall
- generic web development (Twitter Bootstrap, Wordpress)

AUG 2009 — OCT 2009

GIS consultant / Python developer — CATTEDRA DI ARCHEOLOGIA MEDIEVALE, UNIVERSITY OF BARI, ITALY

- structured and launched GIS to manage and catalogue documents and geodata from Siponto excavation site
- implemented open source platform based on Ubuntu Linux, GRASS GIS, Python
- written an operative manual in LaTeX, "GRASS GIS for archaeologists", released in copyleft under GPL license

	GIS consultant — FILAS S.P.A., ROME, ITALY
JUN 2009	*Public sector financing institute devoted to innovation, new technologies and net economy*

- analyzed geographic open source technologies for a touristic-purposed digital bus
- brainstormed guidelines for mobile geographic applications
- designed a *social mapping* open source GIS solution based on OpenStreetMap software stack for Rome cultural heritage sites

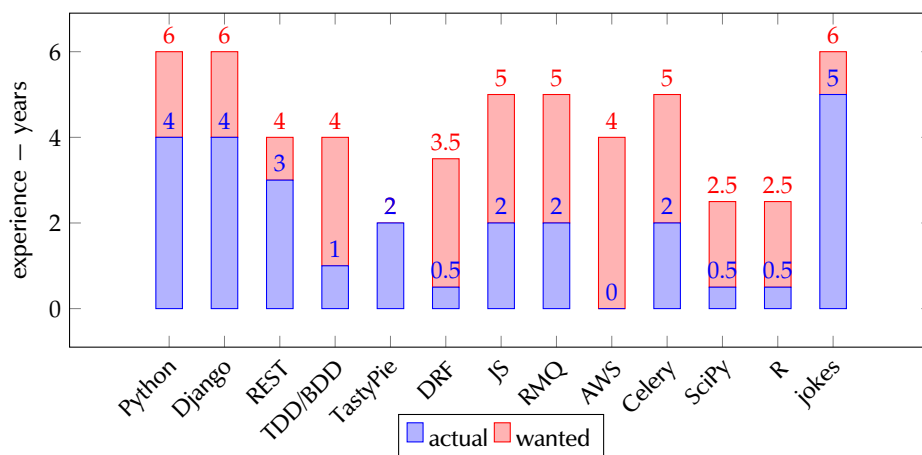## EDUCATION
Attachments available on request

Oct 2006 Mar 2014	UNIVERSITY OF BARI, EARTH AND GEO-AMBIENTAL SCIENCES DEPARTMENT, BARI, ITALY B.Sc. Science and technology for cultural heritage diagnostics and conservation

TOOLS / THINGS I LIKE

PUBLIC SPEECHS   (click for slides)

25 Nov 2011	*OSM e GFOSS: geodati e software liberi in archeologia* GFOSSDAY 2011 University of Foggia
CONF. 14 Oct 2011	*GRASS GIS per l'archeologia: un manuale collaborativo* "GNEWARCHAEOLOGY: FREE/LIBRE SOFTWARE, OPEN DATA AND OPEN KNOWLEDGE IN ARCHAEOLOGY" University of Ferrara
CONF. 28 Nov 2009	*OpenStreetMap: una mappa libera per il turismo* "LE NUOVE TECNOLOGIE APPLICATE ALLA TUTELA E VALORIZZAZIONE DEI BENI CULTURALI" Archeoclub d'Italia, (BA, Italy)
24 Oct 2009	*Cartografia e GIS Open Source: da OpenStreetMap a GeoBase* LINUXDAY 2009 (POTENZA, ITALY)
06 Jun 2009	*OpenStreetMap e archeologia: l'esperienza di Pompei* ANNUAL MEETING OF THE ITALIAN OPENSTREETMAP COMMUNITY Fondazione Bruno Kessler (Povo–Trento, TN, Italy)
02 May 2009	*OpenStreetMap: cartografia in wiki per rilanciare il turismo* BARCAMP "MATERACAMP 2009" (MATERA, ITALY)
25 Oct 2008	*OpenStreetMap: una mappa libera per il nostro Pianeta* LINUXDAY 2008 (BARI, ITALY)

TECHNICAL EXPERIENCE

LANGUAGES	Python, JavaScript, JQuery, XML, HTML, SQL, LaTeX
FRAMEWORKS	(geo)Django, TastyPie, Django Rest Framework, Twitter Bootstrap
SOFTWARE, CONCEPTS	GIT, Nginx, PostgreSQL, PostGIS, Docker, RESTful APIs, Vagrant, VirtualBox, IPtables, GPG/PGP, geographical projections, programming patterns, web developing, operating systems architecture, security, cryptography, file systems, firewall
GNU/LINUX	server mainteinance, Debian, CentOS, Ubuntu desktop/server, ArchLinux, system architecture, installation and package management, Unix commands, Shell and command lines, devices, Linux filesystem, administrative tasks, security and networking fundamentals, Debian package building; deep knowledge and active contributing to the Ubuntu project and tools

PUBLISHED CONFERENCE CONTRIBUTIONS

2010	de Virgilio, F. *Mobile GIS Open Source in Archeologia* [abstract] In: ARCHEOFOSS 2010 - Open Source, Free Software and Open Format in Archaeology Research Processes, May 5–6, Foggia, Italy. Bari: Edipuglia s.r.l; 2011. p. 513.

HONORS AND AWARDS

2010	**Bollenti Spiriti — Principi Attivi** assigned by Apulia Region; the project "Open Siponto — New instruments for the land knowledge", using open source software to manage cultural heritage wins €25,000 Apulia Region funding for 2011.	**Puglia Innovation Contest** assigned by Apulia Region; the project "New methodologies for Cultural Heritage Management", wins €1,000 funding, in section "Creativity industry, innovation for cultural heritage, tourism, instruction, communication".