



## Curriculum Vitae



### Personal information

Name / Surname **Federico Pietro Briata**  
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nationality Italian  
Date of birth 29 / 03 / 1982  
Sex Man  
Driving license A and B

### Work experience

Date January 2015 - Today  
Occupation or position held Software technical lead of Kernel and Stability team  
Main activities and responsibilities

- Jan 2015 worked with Iveco on the integration phase of the BSP with focus on WiFi Linux driver and mesh routing application for the telematic unit PCM.
- Jan 2016 worked on the integration and testing phase of CNHi Java application developed on a Framework Eclipse plugin.
- Sept 2016 worked on the integration and testing phase between IMX6 Control Unit and the Android Display.
- Jan 2017 Software architect and Product owner for Remote Assistance Functionality
- Jul 2017 Porting Criu 2.12.1 on Linux Kernel 3.10
- Oct 2018 worked on POC for convert the Phoenix display with Android to Gnu/Linux on TI J6 Control Unit with Fred application, this become Falcon and moved to production.
- Aug 2019 Software Management of Gnu/Linux on iMX6 Control Unit.
- 2020-2022 worked on POC for convert Android to Gnu/Linux on TI J6 Control Unit with new yocto Dunfell BSP, this become the base for the new Gen OS and framework
- 2023-now, working on new yocto BSP for PCM4 based on NXP S32g to be used with old production framework.
- 2025-now, working with AEF in radio subteam for V2V mesh wifi solution

Employer **CNH Industrial** - Torino (TO)  
Type of business or sector *Information technology – Product Development*

Date	August 2012 - December 2014
Occupation or position held	I've worked in HMI and Video Team, from Ago 2012 in HMI BMW Project and from Ago 2014 in Alfa Romeo Project.
Main activities and responsibilities	<p>The platform is Linux Infotainment System Based on PowerPC and ARM Cortex-A9 Nvidia soc Tegra2 VCM Linux System, realized by Magneti Marelli powered by Wind River SDK that provides a solution for HMI, Radio, Entertainment, Navigation, Voice recognition and TTS (Text To Speech) for BMW luxury vehicle.</p> <ul style="list-style-type: none"> <li>• Aug 2012, HMI/Video SQA Analysis on Harman Elvis web board</li> <li>• Feb 2013, HMI/Video SW Integrator, Validation, Regression Test and Automatic Test</li> <li>• Feb 2014, Developer on PDK Automotive Developer Kit</li> <li>• Aug 2014, HMI Developer and SW Integrator in C++ / HTML5</li> </ul>
Employer	<b>FCA - Magneti Marelli</b> – Venaria (TO)
Type of business or sector	<i>Information technology - Infotainment and Navigation System</i>
Date	February 2010 - July 2012
Occupation or position held	GNU/Linux embedded Architect
Main activities and responsibilities	<p>R&amp;D as developer for OEM Firmware (SDK, WebIF, Linux)</p> <p>Network engineering</p> <p>Wireless Mesh Network 802.11 abgn</p> <p>WiFi HotSpot / captive portal for Hotel, bar, restaurant.</p> <p>GPS/3G for Fast Deploy Emergency network.</p> <p>Web Based Centralized Management and Monitoring for NAAW OS</p> <p>EMC Testing</p> <p>WSN for Automation and Domotics</p> <p>Hack for add wifi mesh network on Android Devices: HTC Dream and Samsung Galaxy</p>
Employer	Winext
Type of business or sector	<i>Information technology</i>
Date	june 2009 – january 2010
Occupation or position held	Programmer C++
Main activities and responsibilities	Study of the rail scheme plan and implement appropriate mechanisms for railway signaling.
Employer	Elecom srl for <b>Ansaldo Railway Signaling</b>
Type of business or sector	<i>Information technology</i>
Date	May 2009 - now
Description	Collaboration with the group simplemachines.it of Catania for the realization of hardware solutions for home automation.
Date	11 September 2008
Description	Organizer of Speech by Richard Stallman in DISI UNIGE with title: "Copyright Vs Community in the Age of Computer Networks".
Date	March 2009 – june 2009
Occupation or position held	University scholarship winner
Main activities and responsibilities	Linux development SDK on equipment Marvell solutions Multicast IP, Gateway infrastructure and satellite radio for fast deploy emergency network.
Employer	Disi, University of Genoa for <b>Selex Communications</b>
Type of business or sector	<i>Information technology</i>
Date	July 2005 -August 2006
Occupation or position held	Web Master – Web Designer - Web Hosting
Main activities and responsibilities	Construction (concept, editing, html, graphics) and continuous updating
Type of business or sector	<i>Information technology</i>
Date	April-june 2004

Occupation or position held Experience Consultant area Unix / Networking / Network & System Management.

Main activities and responsibilities Trouble Ticket Business Management (failures of business customers regarding, network issue, reconfiguration or activation of new account, Ip Provisioning configuration on Cisco equipment and backbone.

Employer **Fastweb** S.p.A., Borgaro (To)

Type of business or sector *Information technology*

Date 2000

Description Construction of a Home Server on SUN SparcStation 20 crew GNU / LINUX Debian users area management (both with Linux NFS, and Windows with Samba configured as a PDC) located on a metadata configured RAID1;

Date 1999-2001

Description Experience in managing a Linux server as secondary DNS for the Piemonte region, connected to an intranet amateur radio, where communications were done via radio with other server, the server supports the following services: WWW, POP3, SMTP, FTP, NEWS, DNS and SSH.

### Education

Date 2001-2007

Title of qualification Degree in Computer Science

Principal subjects / occupational skills Systems Architecture: Integrated, Parallels and Virtual. Software Engineering. Network Applications

Name and type of organization providing education University of Piemonte Orientale "Amedeo Avogadro"

Level in national or international classification Bachelor's degree

Date 1996-2001

Title of qualification High School Diploma

Principal subjects / occupational skills Biochemistry: Creating models of molecular biology: Analysis Laboratory, Physics: Electromagnetism

Name and type of organization providing education Industrial Technical Institute "Carlo Barletti" - Acqui Terme (AL)

Level in national or international classification Second grade secondary school

### Personal skills and competences

Mother tongue **Italian**

Other languages (\*)

Self-assessment

European level

**english**

**spanish**

**polish**

comprehension				speaking				writing	
listening		reading		Oral Interaction		speaking			
B2	intermediate	B2	intermediate	C1	advanced	C1	advanced	B2	intermediate
A2	elementary	B2	intermediate	B2	intermediate	B1	intermediate	A2	elementary
A2	elementary	A1	elementary	A1	elementary	A2	elementary	A1	elementary

(\*) Common European Framework of Reference for Languages

Socio-organizational skills and competences	<ul style="list-style-type: none"> <li>• Great team spirit, gained from personal experiences that have taught me the value of the common effort to achieve results otherwise unattainable.</li> <li>• High ability to adapt to different social and cultural contexts. Experience in developing open-source projects, are able to collaborate in groups distributed worldwide.</li> <li>• Excellent ability to listen, to implement and to promote the ideas of others.</li> <li>• Passion for technology, learning new technologies by myself</li> </ul>
Certifications and certificates	<ul style="list-style-type: none"> <li>• Certificates of participation in Altia Altia Design ad Altia DeepScreen distributed by Teoresi spa.</li> <li>• Certificates of participation in CAN and CANalyzer network</li> <li>• Certificate CISCO CERTIFIED NETWORK ASSOCIATED (CCNA4 1 / 2003), have been achieved and exceeded the following final examinations at Networking Academy: CCNA 1: Networking Basics - Version 3.0; CCNA 2: Routers and Routing Basics - Version 3.0; CCNA 3: Switching Basics and Intermediate Routing - Version 3.0; CCNA 4: WAN Technologies - Version 3.0.</li> <li>• Certificate of attendance of the course 'Etical Hacking' SecureGroup held by the company for 30 hours at the Univesità del Piemonte Orientale Amedeo Avogadro.</li> <li>• Certificates of participation in various stays studying abroad. In 1998 and 1999 in the English city of Brighthon at The English Language Centre, in Dublin. In 2000 at the Centre of english Studies.</li> <li>* September 2004 - February 2005, certificate of participation in the project SOCRATES-ERASMUS in "Polsko Japońska Wyzsza Szkoła Technik Komputerowych", Warsaw (Poland).</li> </ul>

## Computer skills and competences

### Programming Languages:

- In-depth knowledge of: HTML 5, CSS3, PHP4, Lua, Bash and JavaScript.
- Excellent knowledge of: C, MySQL, Perl, JSP, and JQuery.
- Good knowledge of C + +, Java, Python, XML

### Operating Systems:

- Since 1999, I have gained a great experience on GNU Software especially this distributions: Debian / Linaro and other derivatives, OpenWRT (from 2005), Yocto / OpenEmbedded, OpenRG, Android (arm / x86), Cyanogenmod, MontaVista, and derived Gentoo, Slackware, BackTrack, Knoppix , RedHat, Centos, Meego, Mobile Nemo, Wed, and more.
- Microsoft Windows.
- BSD (FreeBSD, Solaris, MacOSX)
- OpenBoot, uboot, redboot, MyLoader, Lilo, grub, EFI loader

### Development:

- Linux devices drivers: usb, i2c, gpio, uart and GPU (lima/mali, freedreno/adreno).
- Linux modules: madwifi, ath9k, alsa, tun / tap, batman
- Android firmware developer: working with Google SDK, NDK and ADK on Freescale and Nvidia board.
- Collection, analysis and management of hardware requirements
- Integration systems through the development tools: GNU GCC, GNU Make, patches, GNU autotools, Debian Package rebuilder.
- Excellent knowledge of CMS: Wordpress, Joomla, Drupal and Wiki.
- Excellent knowledge of SDK for MIPS and ARM micro-controller: AVR ARDUINO, MALI 400 GPU (AmLogic 8726-MX Rockchip RK3066), Adreno Qualcomm Snapdragon, Nvidia Tegra2, AVR32, iMX5/iMX6 Freescale, Broadcom, Cirrus EP9307, Atheros AR7/AR9, Samsung SoC Marvell Orion Presteria 88fx81, Intel XScale iop32x and Sun SPARCstation 20.
- Knowledge of Socket taken advantage of Berkeley, Mutex, Thread and MPI.
- Excellent knowledge of software automatic controls.
- Excellent knowledge in the field of web design and content structure, CMS, color theory, print, vector graphics and animations web2.0.
- Good knowledge of ticket tracking tools Remedy
- Excellent knowledge of software integration management tools: CVS, Git and Subversion
- Excellent knowledge of the IDE: Eclipse, GO @ IDE and MS Visual Studio.
- debugging application with Lauterbach TRACE32
- testing application with CANalyzer/CANoe tools

### CI/CD systems:

- Gerrit, gitlab, Trac
- Jenkins
- Jfrog

### SW and specs tracking systems:

- Polarion
- Atlassian Jira

### Networking and Configuration:

- Knowledge of Internet application protocols: MQTT, DDS
- Experience in vehicle applications including CAN communication, J1939 protocols,
- Knowledge of routing protocols: OSPF and STP.
- Knowledge of mesh protocols: OLSR and BATMAN-adv.
- Experience in IoT solution MS Azure IoT.
- Experience in Over The Air update solutions with RedBend
- Knowledge of technology applied to FastWeb CISCO (Router: 1751, 1760, 2621 and 3640 and the Catalyst: 2950, 3524 and 3548) and HAG Telsey and Pirelli.
- Knowledge of the technology of captive portal RADIUS system applied to equipment HP Procurve 710 and WinExt NAAW.
- automotive communication protocols: CAN and MOST, analysis methodology on blue PiraT
- Tools Virtualization known
  - Full: VMWare, VirtualBox, KVM
  - Para: Xen
  - Container: OpenVZ, LXC, Criu.
  - Translation API: Wine

	<ul style="list-style-type: none"> <li>- System Emulation: QEMU, dos Mame, Vice</li> <li>• Excellent knowledge of VoIP (H.323, SIP) with specific tests on ARM architectures in particular on architectures in particular on architecture Asterisk/FreePbx and FreetzBox!</li> <li>• Good knowledge of hardware architecture of SUN Sparc Server;</li> <li>• Installation, configuration, administration (LAN, VLAN, WLAN, VPN)</li> <li>• Excellent knowledge of software for firewalling: Ipchains, Iptables;</li> <li>• Knowledge of video surveillance software ZoneMinder applied to products IPCAM Axis.</li> <li>• In-depth knowledge of the following network services: OpenVPN, Apache, MySQL, phpMyAdmin, Tomcat, ProFTP, Exim, Sendmail, Squid, Bind, Inn, Samba, TFTP, NFS, Nis, CoovaChilli, tinyproxy, procmail, Squid, Samba, NFS, pepsal, wireless tools, redsocks.</li> <li>• Software penetration test (John the Ripper, Rainbow Cracking, kismet, aircrack);</li> <li>• Knowledge of other free software tools: kicad, jackd, Mixxx, Jamin, XBMC, gnuradio, Navit, TsLib, wayland.</li> </ul>
	<p>Other Applications:</p> <ul style="list-style-type: none"> <li>• Realtime audio, WebSDR Radio Server, hometheater TV (XBMC, VDR), jackd, Mixxx, Jamin, Zoneminder and IPTV multicast.</li> </ul>
Other skills' and competencies	<ul style="list-style-type: none"> <li>• Excellent knowledge in the design of antennas for microwave receivers and transmitters;</li> <li>• In-depth knowledge of digital modulation systems over the air, was pre-WiFi (FAX, SSTV, RTTY, PSK31), particularly in digital data transmission (packet, AX.25) with QPSK, BPSK;</li> <li>• Holder of the Class A license to operate a radio station with the station name: IZ1GLG;</li> <li>• Use of equipment to amateur radio receivers and transmitters;</li> <li>• Using advanced image editing programs (Adobe PhotoShop and Gimp);</li> <li>• Experience in construction of small PCB (printed circuit board) via photoetching</li> <li>• Experience in installation of electronic equipment and special wiring.</li> <li>• Excellent knowledge of DVB-S to receive MPEG streams via DiSEqC motor control</li> <li>• knowledge of orbital positions, feed the main European satellites and transponders.</li> <li>• knowledge of Doors requirement tool</li> </ul>
More information	<p>Participation on various Mailing List:</p> <ul style="list-style-type: none"> <li>• Linux Users Group Genoa;</li> <li>• Linux wireless;</li> <li>• Linux alsa-devel;</li> <li>• Linux usb-devel;</li> <li>• debian-arm;</li> <li>• debian-kernel;</li> <li>• debian-hams;</li> </ul> <p>URL:</p> <ul style="list-style-type: none"> <li>• KiwiSDR a Software Define Radio <a href="http://kiwisdr.briata.org:8073/">http://kiwisdr.briata.org:8073/</a></li> <li>• Github <a href="https://github.com/federicobriata/">https://github.com/federicobriata/</a></li> <li>• LinkedIn <a href="https://www.linkedin.com/in/federicobriata/">https://www.linkedin.com/in/federicobriata/</a></li> </ul> <p>Personal interests and more:</p> <ul style="list-style-type: none"> <li>• Judo martial arts practitioner since 1987</li> <li>• Patent lifeguard with knowledge of first aid since 1999</li> <li>• Skiing</li> </ul>

## Publications

- 2020 – I1cra blog: diy stuff, <https://i1cra.briata.org/author/iz1glg/>
  - 2020 – Live audio jaming on Linux  
[https://github.com/AudioHackLab/live/blob/master/ninjam/ninjam\\_installation\\_guide.md](https://github.com/AudioHackLab/live/blob/master/ninjam/ninjam_installation_guide.md)
  - 2018 - Arduino pcb for Morse coder and decoder “yaacwk” <https://hackaday.io/project/159580-yaacwk-yet-another-arduino-cw-keyer>
  - 2016 - Radiokit Marzo – Arduino Nano Morse Keyer with memory
  - 2008 - NetGear WGT634U VS Asus WL500GPv1 Debian and derivatives;
  - 2008 - HowTo for proper support of the soundcard Tascam us-122l on distributions;
  - 2007 - UniPmn, thesis
- Creation of a web interface for managing OpenVPN applied in wireless environment;
- 2004 - Design a small directional antenna for 144 MHz;
  - 2001 - ITIS Biological, final thesis;
- Using GNU / Linux systems for display and analysis of macromolecules using VMD (Visual Molecular Dynamic) used for the study of anticancer drugs.