

## PERSONAL INFORMATION

## Gianpaolo Macario



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## PERSONAL STATEMENT

Software architect with a longstanding working experience in multinational teams for the development and integration of embedded software targeting the industrial and automotive sectors.

Achieved successful results in different project roles throughout the R&D organization, including product conception and prototyping, design for volume production and management of software vendors and suppliers.

Enjoys sharing knowledge and coaching postgraduates and junior team members through a training-on-the-job approach. Enthusiastic about open source and innovative technologies, always avid to learn and accept new challenges.

Keywords: Software Architecture, Embedded Systems, Embedded Linux, Android, Open Source Software, Yocto, CI/CD, Arduino, IoT, In-Vehicle Infotainment.

## WORK EXPERIENCE

Feb 2018–Present

## Software Architect and Release Manager

AROL Group S.p.A., Canelli (Italy)  
[www.arol.com](http://www.arol.com)

Reporting to the AROL Group R&D Manager, introduced advanced software engineering processes and methodologies to enable the development and validation of a new embedded HMI and Control System for the AROL Group product line.

Technologies: Jenkins, Yocto, Node.JS, Qt, Kubernetes, JIRA Software, Confluence, Bitbucket

Mar 2012–Present

## Cofounder and CTO

SOLARMA snc, Cuneo (Italy)

Founder and CTO of a SME specialized in the design and operation of Photovoltaic Systems. Introduced and applied innovative IoT technologies to minimize technicians on-site visits and improve margins.

Also providing training and consultancy services on embedded Linux and IoT technologies to enterprises working in non-competing industries.

Technologies: Arduino, Docker, Jenkins, Yocto

Sep 2012–Jan 2018

## Senior Member, Linux Services

Mentor Graphics - Embedded Software Division, Torino (Italy)  
[www.mentor.com/embedded-software](http://www.mentor.com/embedded-software)

I was part of a global team with operations in Europe, U.S.A., India and other geographies delivering Linux and Android professional services to the automotive and other industry sectors. Some activities performed in this role:

- Consultant and technical advisor for leading automotive OEMs and Tier-1s on both platform and product In-Vehicle Infotainment development projects based on Linux. Focusing on the global software architecture, system infrastructure and Continuous Integration/Continuous Delivery
- Lead Engineer of a Dedicated Engineering Team supporting a Tier-1 supplier in the development and maintenance of an optimized embedded Linux distribution (custom target based on Freescale

i.MX6 SoC). Main focus on BSP and system startup

- As part of a number of customer services engagements, identified bottlenecks and optimized system builds of commercial Embedded Linux distributions based on Yocto
- During the pre-sales process, architect responsible for gathering customer needs and requirements, then defining the solution and coordinating the technical response up to its delivery
- Acting as technical representative of Mentor Graphics within the GENIVI Alliance, with the goal of ensuring coordination and alignment between the company product roadmap and the planned updates of the GENIVI Platform Compliance specification

Jan 2012–Jan 2018

## System Architect

GENIVI Alliance

[www.genivi.org](http://www.genivi.org)

Representing the mother company inside the GENIVI Alliance covering the following roles:

- Lead Architect of the System Infrastructure Expert Group (SI-EG)
- Voting Member of the System Architecture Team (SAT) and the Compliance Team

Responsible for performing and coordinating several activities and projects, including the following:

- Launched, contributed and acted as maintainer of a few public open source projects with a focus on: Embedded Linux, CI/CD, Android, Arduino and the Internet of Things
- Performed a comparative study of the Security architecture and the Access Control mechanisms available on GENIVI and the Android software platform
- Managed and contributed to a project to assess the performance impact when deploying Embedded Linux and Android distributions through Linux Containers or a Type-1 Hypervisor
- Managed cooperation and contribution with University postgraduates and researchers
- Submitted papers and delivered talks about embedded systems and open source during international conferences, University lectures and other public events

Jun 2006–Aug 2012

## Software Platform Leader

Magneti Marelli Electronic Systems, Venaria Reale, TO (Italy)

[www.magnetimarelli.com](http://www.magnetimarelli.com)

- From Jul 2008: Software Platform Leader responsible of the development and productization of a new Linux-based platform for MM infotainment systems
- From Oct 2007: System Architect and Project Lead of the team tasked of the development and integration of an A-Sample unit for the next generation of infotainment systems for a top German car maker. The product was developed on a reference hardware design provided by a lead US Silicon Vendor, with a commercial Embedded Linux distribution and third-party middleware. MM was responsible of the application development, system integration and validation, plus the overall project management. The outstanding result of this project convinced the customer to move on to the productization phase together with MM and its project partners.
- From Jan 2007: Responsible of a joint team at Politecnico di Torino with the mission of developing innovative proof-of-concepts and prototypes of IVI systems based on Open Source Software
- From Oct 2006: Technical Leader in a joint project together with Telecom Italia to develop and deploy telematics services in the automotive space

Jul 2005–May 2006

## ICT Manager

Comau S.p.A., Grugliasco, TO (Italy)

- As a result of the termination of the Joint Venture between IBM and Fiat I moved to the Robotics Business Unit of Comau, where I became responsible of the operations and the evolutive maintenance of an enterprise application for Product Lifecycle Management
- Related products and technologies: MatrixOne eMatrix, BEA WebLogic, Oracle, J2EE, XML

Apr 2002–Jun 2005

## Senior Consultant, Wireless Solutions

GlobalValue (an IBM and Fiat Company), Torino (Italy)

Responsible for several activities and projects including:

- Provided training and consulting to an European automotive Tier-1 Supplier on embedded software development, Linux and Java for an innovative telematics project developed within the EU 6th Framework Programme. Specific tasks: porting and optimization of an Embedded Linux distribution to a custom target (ARM architecture), debug and adaptation of the Linux Bluetooth stack for a custom Bluetooth adapter, porting of the IBM J9 Embedded Java Virtual Machine
- Worked jointly with an international IBM team (US, Korea, France) on a global telematics project for a leading Korean car manufacturer. Developed API, reference implementation software (J2ME, SWT) and Eclipse plugins; organized the technology transfer workshop to the customer
- Prepared training material and performed a few workshops about RFID in US and Germany, assisting and mentoring on the J2ME/J2EE middleware solution developed by IBM
- Worked as technical support of GlobalValue and IBM on several opportunities involving wireless and telematics technologies. Organized technical meeting and workshops with customers, identified solution and worked on the architecture and the project sizing
- Developed a feasibility study and a pre-production pilot of a service of Mobile Office Synchronization between heterogeneous mobile devices and corporate servers via wireless networking and an infrastructure based on IBM middleware

Feb 1998–Mar 2002

### System Engineer

Magneti Marelli Sistemi Elettronici, Venaria Reale, TO (Italy)

- Ported and configured Embedded Linux on custom target hardware (x86 and Hitachi SH architectures)
- Designed the software architecture and led a team of developers to prototype a Java+OSGi-based in-vehicle telematics system running on production-grade hardware
- Transferred technology and knowledge to company on: Open Standards, Internet Protocols, Web, WAP, Java, and Real-Time Operating Systems

Nov 1992–Jan 1998

### Design Engineer

Società di Elettronica per l'Automazione (SEPA), Torino (Italy)

- Responsible for RTOS porting and firmware design to custom hardware

## EDUCATION AND TRAINING

Oct 1990–Oct 1992

### Dottorato di Ricerca in Ingegneria Informatica e dei Sistemi

Admitted to third year  
(Italian Ph.D.)

Politecnico di Torino, Torino (Italy)

Oct 1985–Dec 1989

### Laurea in Ingegneria Elettronica

110/110 Summa  
Cum Laude

Politecnico di Torino, Torino (Italy)

Oct 1981–Jul 1985

### Diploma di Maturita' Scientifica

60/60

Liceo Scientifico Statale "Giuseppe Peano", Cuneo (Italy)

## PERSONAL SKILLS

Mother tongue(s)

Italian

Foreign language(s)

|         | UNDERSTANDING |         | SPEAKING           |                   | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
|         | Listening     | Reading | Spoken interaction | Spoken production |         |
| English | C2            | C2      | C2                 | C1                | C2      |

| Top Level (100/100) of the Shenker Method - The Shenker Institute of English |    |    |    |    |    |
|--|----|----|----|----|----|
| French   | B1 | B2 | B1 | A2 | B1 |
| German   | A2 | A2 | A1 | A1 | A1 |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

- Digital skills**
- Programming Languages: C, C++, Java, Bash, Python
  - Configuration Management: Git, SVN
  - OS: Linux, MS Windows, Mac OS X
  - Tools: Jenkins, Yocto, Docker, Kubernetes, GitHub, JIRA, Confluence, Bitbucket

**Driving licence** B