José Miguel Martínez Aguayo - CURRICULUM VITAE

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Abstract

Tech Lead, CTO, IT architect, software development, cloud, entrepreneurship
Telecommunications engineer with a high technical profile, extensive experience in software development, public and private research (research, investigation and innovation), IT, networking, security and consulting. Entrepreneurship, Management positions, leadership, dealing with customer, team coordination and training companies.

Tasks

- **Tech Lead** - Team manager – Project manager
- Software development (**IT Architect**, analyst and programmer)
- Consultant
- Network security expert
- Researcher
- Teacher
- Technical support to sales department, client needs identification
- Customer support

Areas

- Software development (Linux expert, all major programming languages)
- Networking, communications, system administration and system security
- R&D

Skills

- Creative. Innovation
- Analytical. Complex problems.
- **Entrepreneur**, passionate, enthusiastic, team-player, team leader

Goals: Tech Lead / IT Architect / CTO / Team manager and architect in R&D projects (software development, networks and security)

Languages: **Bilingual Spanish/English**. **Basque:** Intermediate

Professional Experience - Summary (See comprehensive portfolio below for details)

- 5/2024 a 3/2025: SAVEFAMILY – **CTO.** E-commerce, Worpress, AWS, Smartwatch, Shopify, Android, IA, Chatbot, ChatGPT, LLM, NLP, NFC payments, SIM Card telephony, Laravel.
- 1/2020 - 9/2023: ORONA **- Solution IT architect. Manager:** IT strategic plan, AWS, Devops, IoT, CMDB, docker, Lambdas, serverless, SonarQube…
- 2019 – 01/2020: SOLMICRO**,** Zucchetti Spain - **Solution IT architect and developer:** Azure Cloud, C#, Time Series, OPC…
- 01/2014 - 2019: ISETIC - **CTO, Founder** (10 memb.): AWS**,** Java, Dynamo, Kinesis, RDS, Modbus…
- 01/2010 - 02/2013: DIVISOFT - **I+D+i área manager, Tech Lead** (20 memb.), **Software architect and developer**: Java, ERP
- 02/2007-10/2009: EXTERNAL - **Automation software analyst and developer; researcher, consultant, coordinator and support in big datacenter** (Eroski). Python/Linux/AIX/Novell…
- 05/2005 - 02/2007: PANDA SOFTWARE – **Software development (architecture, design, and programming) of security software for Linux**: C/C++/Python/firewall and intrusion detection system IPS/Linux Kernel.
- 11/2004-05/2005: ABARTIA TEAM - Software development, communications, networking and security **area manager** (3 memb.). Analyst, programmer and consultant. Linux, PHP…
- 2002 - 2003: CAPTIVA SOLUCIONES Y SEGURIDAD: **Researcher, cybersecurity software developer** and system administrator. C/C++/Linux/TCPIP
- 2000 - 2004: ESCUELA SUPERIOR DE INGENIEROS DE BILBAO - **Researcher in Telematics Engineering Group:** C/C++/Python, Linux, cybersecurity, TCPIP

Education

1994-2000 - Master of Science Degree in Telecommunications Engineering (6-year program) (specialty telematics) – Basque University School of Engineering (UPV/EHU).
Other studies:
- 2022 - JST349 **Devops** Foundation OT11831.01
- 2020 - Cybersecurity awareness
- 2014 – **Business management** training (DEMA)
- 2011 – Executive **Couching** program: emotional intelligence, business strategy, leadership, motivation, high performance team management, market and customer orientation (Leimotive holding 2011-03 2011-12)
- 2009 – Microsoft SQL **Server Course** At San Roque School (Programming, administration, transant SQL) (215 hours)
- 2007 –Network Management Tool **CA Unicenter** Certification Course (80 hours)

Comprehensive Professional Portfolio

5/2024 a 3/2025: SaveFamily https://www.savefamilygps.com/

CTO: Tech Lead, project management (internal and external). 6–8-member team.
- **Ecommerce**: Wordpress, WooComerce, Shopify, ChatGPT, IA, GhatBot
- **Smartwatch Apps** applications development: Android, Firmware, Unity, LLM, NLP, TTS, STT, Amazon Poly, NFC payments, Tensorflow
- **Intranet**: Intranet software platform development. PHP, Symphony, Laravel, API, Integrations, Locker…
- **Proprietary Telephone Service:** Subscription process automation (PHP, Python)

- **Journey to cloud**: AWS, Landing, Control Tower, Finops, Security, Inventories, etc
- **DevSecOps,** Devops**,** Ansible, Github, Jira, Confluence

1/2020 a 9/2023: Orona– Guipuzkoa - https://www.orona-group.com/es-es/

Solution IT Architect: **Manager**. **New IT architecture department creation. Projects**:
- IT strategic plan
- IoT Project – Manager, Cloud Platform Development for Lifting Business (AWS: IoT, Lambda, SNS, SQS, Api Gateway, WAF, Couchdb…)
- Journey to Cloud Project (AWS, Organizations, foundation, terraform**…)**
- Devops project (agile methodologies, Jira, Azure Devops, Jenkins, Sonar…)
- Technical software development offices coordination
- CMDB Project
- Software integration architecture project (API, openapi, stream, bróker, queues…)
- Software execution architecture Project (docker, serverless, microservices, etc.)

2019-2020: Solmicro - Zucchetti Spain– Vizcaya - https://www.solmicro.com/

Solution IT Architect and Developer: Cloud platform development for Smart Industry in Microsoft Cloud (Azure Cloud, C#, netcore, docker, Vue, OPC, gRPC, Time Series…).

01/2014-2019: ISETIC– Vizcaya - http://www.isetic.com

Chief technology officer. Founder and promoter. (10memb.)
Tech Lead for platform architecture, design and development of Zeus, first **low cost** and **flat rate** monitoring and automation service for multiple businesses: Information systems, business processes, industrial processes and the internet of things.
Technologies: Cloud computing, SaaS, Big Data, Orchestration Monitoring, **AWS, Java**, Spring, SpringBoot, IaC, Ansible, Terraform, Docker, containers, LXC, lambdas, microservices, python, nagios. Modbus, OPC,Vue, swagger, Hadoop, HortonWorks, Hive, Pig, Proxmox, Kinesis, ECS, S3, RDS, Lambda, EC2, Dynamo, VPC, Linux LUKS, Boto3, Pentaho ETL, Xen, Qemu, Fiware, Openweathermap, Accounting software development, Energy management, solar farms

About Zeus:

> Zeus provides monitoring and task automation services through an innovative and disruptive model on market, supported by a "LOW COST" and "FLAT RATE" business model, where customer does not make an investment and only pays a monthly fee for the service.
>
> It monitors and automates "Information Systems", "Business Processes", "Industrial Processes" and "Internet of Things".
>
> Able to monitor and automate any element or process, thanks to highly qualified people in Isetic team and his revolutionary new Cloud Computing Technology Platform.

02/2013-01/2019: WISESOLUTIONS – Vizcaya - http://www.wisesolutions.es

Part-time freelance software developer for several customers from WiseSolutions personal Brand
IT architectures design and solutions for enterprises.
- KimetAnimator Project (kimetsport.com): Design and development of backend for sports training graphic application. (Technologies: php, javascript).
- Gas consumption prediction system project (Naturgas): integration architecture design

01/2010-02/2013: DIVISOFT, SYGES GROUP (Vizcaya) http://www.divisoft.es/
http://www.leimotivholding.com/

Research and development area manager, tech lead (20 memb.), software architect and developer (Java, ERP)
- **Provision project:** Design, **architecture**, development, research, innovation, management and **team leading** (10-20 members) for creating **from scratch** an **application development platform** and building an online desktop and complete flows oriented ERP using this architecture. Technologies: Java, GWT, SMARTGWT, Hibernate, Jenkins, mysql, postgress, python. This will be used by Leimotive holding and offered customers. Remarkable modules:
  - o **ORM:** Client/server, configurable, dynamic, abstract
  - o **UI**: Dynamic building of stored views perfectly coupled to ORM
  - o **UI designer**: RAD and WYSIWYG tool for developers.
  - o **BPM** (process engine): organization management oriented (Quartz, jBPM…)
  - o **Modular** architecture: ERP like live module setup and integration
  - o **Multilanguage calculator** (Java, javascript, custom…): ORM and UI integrated; abstract, no compilations needed. (ANTLR, Java, Javascript embebed)
  - o **VFS (**virtual filesystem)
  - o Other core platform modules (message routing, alerts, revisionable entities, third party products wrapper as neetmeeting Bigbluebutton, Zimbra colaboration and Nuxeo document management…)
- Build from scratch a new **development team** and **quality team** with tools and procedures.
- Develop **strategic plan** for research and development and innovation area.
- Also participating as a consultant building from scrach the **new datacenter** for Leimotive Holding**.** (Communications, services, virtualization…)
- **Executive couching program**: emotional intelligence, business strategy, leadership, motivation, high performance team management, market and customer orientation

2007-2010: EXTERNAL, GRUPO VERSIA – Vizcaya - http://www.grupoversia.com

Automation software analyst and developer; researcher, consultant, coordinator and support in big datacenter (Eroski). Innovation

Collaboration with multiple environments (OS Linux, Middleware Web, Network Management, Consulting). Customer: Eroski Group. Data center corporate machines.

Projects:

- **Automation projects** (**Development**: Architecture, analysis, design, programming and coordination):
  - EROSCAN: Development of massively parallel generic data collection and unattended operation scanner for Linux and AIX machines Scanner:
  - AUTOAUDIT: Architecture for automatic data collection, processing and audit reports presentation for Linux and AIX machines
  - Automated handling of Novell errors copies: Capturing information, analysis, detection and automated error reporting. Statistics. Integration with CA Unicenter incident tracker
  - Virtual system administration operator: Architecture and software development to replace human operators in mechanical tasks.
- **Development** projects
  - **Development of network management agents** for Linux and AIX: inventory, alarms and performance. CA Unicenter integration.
  - RENOHA project: **High availability** active-passive machines **script development**.
  - ALARMFIRESTAT project: **postmortem analysis** agent development
  - Universal boot CD for total and partial **disaster recovery**
- **Consulting** projects
  - GEOCUMA: Internal **consultancy** to meet the needs of **process management, integrated management and BI**
  - ARQUITIL: Architecture and product selection for **ITIL** implementation for Versia and clients.
- Application and database migration
- **Support** projects
  - GEMINIS project: Participation and support in **migration** of a complete **data center**.
  - RENOSAN project: Participation and support of system migration storage **cabinets**

Architectures 368, x86_64, IA64
Hardware: IBM, Intel, Blade, Bull, Novascale, Raritan, fiber optic cabinet EMC, Hitachi, QLogic
OS: Linux, AIX, Solaris
Tools: CA Unicenter, Nagios, LDAP, sar, backups (faubackup, legato ...), document management (mydms. ..) code repository (subversion, trac ...) system-imager, snoopy, sql server, tomcat, IAS, oc4j, MicroStrategy, liferay, php, apache, mysql, oracle, db2, GoogleSearch, jabber, virtualization, xen, qemu, linux virtual server; chroots, dns bind, sar, heartbeat, snmp, print queues, training on development issues. dns bind, OpenERP, Pentaho
Skills: Python, bash script, package building, disaster recovery
Certification course Network Management Tool CA Unicenter

2005- 2007: PANDA SOFTWARE INTERNATIONAL - Bilbao - http://www.pandasoftware.es/

Development (architecture, design, and programming) of security software for Linux: firewall and IDS, C/C++/Python.

- Project **Desktop Secure for Linux** antivirus for Linux Desktop. Author of ALL network functions.
  - **Firewall** module: Advanced **application detection** module for Linux firewall
  - Network **intrusion detection and prevention** module (IPS)
  - Other network related modules (Library to send mail via SMTP…)
- Skills
  - TCP / IP, C and C + +, python, Snort, IPQ, Linux Kernel, Python, iptables, GTK
  - Software Optimization in Linux. Performance studies. (OProfile, gprof, vmstat ...)
  - Concurrent programming, threads, sockets.

2004-2005: ABARTIA TEAM - Bilbao - http://www.abartiateam.com/

Communications, software development, networking and security area manager (3 pers.). Analyst, programmer and consultant.

- Management: Management of software projects
  - Php + mysql web projects (eg http://www.viajesargonauta.com/)
- Customer and relations:
  - Dealing with customers.
  - Technical support to sales people.
  - Client needs identification
  - Attendance at technology conferences and relationships with companies for cooperation on larger projects.
- Training:
  - Taught seminar for SAP programming in Visual Basic. (NSI)
- Consulting
  - Distributed backup system for the IBM AS400
  - Distributed backup system among distant offices using cheap solution based on Linux (Abartia Team)
  - Computing infrastructure migration to Linux projects.
- Development
  - Web positioning monitoring system (Java, Perl, SOAP, Google API)
- Strategy
  - Design of Linux-based products for SMEs
- Communication projects
  - Design and implementation of networks.
  - Networking, wireless, PPTP tunnels, Openvpn, routers.
- Systems:
  - Implementation and management of infrastructure.
  - CRM, Bug Tracker, CVS, development tools ...

2000 – 2005: GRUGEIN S.L. - Bilbao - http://www.grugein.com/

Freelance IT Consultant. Network deployment, training and infrastructure.

- Advice on purchase and procurement of IT services
- Deployment of communications infrastructure
- Systems management, remote maintenance and troubleshooting
- Training companies. Workshops on networking, Internet, intranet, utility, security, communications.

2000 - 2004 : BASQUE UNIVERSITY SCHOOL OF ENGINEERING -Bilbao- http://det.bi.ehu.es/Bilbao

Researcher in Telematics Engineering Group of the department of electronics and telecommunication. (C/C++/Linux/cybersecurity/TCPIP)

- Research
  - Participation as a researcher in several R&D projects related to issues of intrusion detection and network security.
- Teaching.
  - Seminars on programming. (JAVA, C ++...)
- Systems and network administration
  - Local and Network Management UNIX / Windows.
  - Management tools and network monitoring (Nagios, Snort ...)
- Development
  - Programming with cryptographic functions.
  - IPQ and LIBPCAP programming for traffic analysis
  - Web Application Programming in Java.
  - Integration of security tools

Project: "Distributed model for intrusion detection in large networks."
Research project funded by the Basque Government through the program INTEK 2000. The project though mainly theoretical, had a practical component was to develop a prototype intrusion detection sensor. For this purpose an OSKit kernel development kit was used, on which a version of Snort IDS software was adapted.

Project: Telematic Network Simulator
Research project for creating a software simulator of traffic networks. The simulator receives the definition of a network based on a description of topological and statistical parameters of its elements and is able to find through simulation mean values, points of congestion, etc.

Electronics project: opto-coupled amplifier
Electronic project intended to amplify a signal of certain frequency and dynamic range without physical contact between two electronic components using low cost components such as resistors and LED diodes.

End of degree project: SpyNet. Architecture and design of distributed system for capture and correlated analysis of network traffic based on a programmable network sensor capable of local capture and analysis
The project sought to build a complex architecture over network sensor with programmable capture capabilities and traffic analysis as ADVISER. There was an extensive study on network technologies and existing frameworks such as CORBA and XMLRPC to finally define the interfaces and elements of that architecture. We implemented a prototype of it on the prototype ADVISER and created several tools in terminal mode (ncurses) and web (CGI, PHP, JAVA) for data presentation.

Project: Migration to open platform of the tools used in practices and mathematical works of signals and systems department.
This study aimed to test the feasibility of replacing MathLab commercial tools with other open source tools as octave. Finally it was concluded that this was possible. They math libraries were extended wherever necessary.

Project: math library in C + + templates for generic algebra without loss of accuracy by truncation, rounding or ill-conditioned systems.
We conducted a library capable of solving math problems without loss of accuracy for representation of floating point numbers.

Development of artificial intelligence framework for games. Engine development for games like checkers or chess.

2002-2003: CAPTIVA SECURITY AND SOLUTIONS S.L. - Vizcaya - http://www.captiva-sys.es/

Researcher, cybersecurity software developer and system administrator:

- Researcher on development projects, integration and research.
- Designer and developer of applications on different platforms and environments (C / C + +, Visual Basic,. Net, Python, Mono, Bash script, perl, etc.).
- Web designer and database administrator in open and commercial platforms (MySQL, PostgreSQL ...)
- Systems Administrator: Windows (NT/2000/XP/2003) and Unix (Linux - Debian / RedHat / Ubuntu, FreeBSD, Solaris 8 / 9)

Adviser Project (Administration Diagnosis and Intelligent Verification in Network Services)
Three-year project funded by the INTEK 2002 in collaboration with the Engineering School of Bilbao.
Project was intended to obtain pre-competitive prototype architecture based on generic network sensor from passive listening able to determine different traffic problems or make measurements. Designed to make products to measure / ensure quality of service in networks or provide security services such as IDS, antivirus, etc..
Sensor was concluded with XML configurable rules, written in C and integrated with other modules to provide further functionality, such as NetFlow collector (also in C) and web application in PHP to display graphical results from RRD database. Tasks undertaken in the project:

- Architectural design and various sensor modules
- Design of communication protocol between sensor and collector
- Web Application Development in PHP for graphics rendering RRD database
- Implementation and testing of prototype in real clients (Sarenet and Punto Radio)
- Development of high level tools for integration of network security products as ARGUS, ADVISER or NTOP.

Project: kiosk platform for mobile content distribution Xonae
Consulting project for integrating components in touch-screen kiosk platform for mobile content distribution for establishments.

- Development of COM component in Visual Basic for simple communication with purse Münzprüfer WH EMP 500 via series Dietmar Trenner GmbH, after study of communication protocol of private enforcement by some reverse engineering.

- Developing COM communication component for communicating with Jofemar note reader.
- Study system and migration of Windows to Linux platform. Migration from Access to MySQL and ASP to PHP.

1994 – 2006: FREE-TIME FREELANCE PROGRAMMER

Free-time freelance programmer for various clients. Several customers
- Freelance webmaster.
- Custom software development in various languages (PHP, JavaScript, Visual C + +, Visual Basic ...)

Technical knowledge

Programming
- Very high knowledge in programming: Assembler x86, PIC assembler, C, C + +, Visual C + +, Java, C #, Python, Perl, Awk, Visual Basic, PHP, shell script (bash, sh ...), Java Script, VB Script ... Tools GNU, Unix, Borland Jbuilder, Eclipse, vim, emacs, anjuta, gdb, Microsoft Visual Studio, Borland C + +, GNU tools, autotools ...
- Distributed the client and server side programming. RMI, SOAP, XMLRPC, Corba, RPC, sockets, TCP / IP, distributed models ...
- Cooperative programming, workgroups (FOSS model, CVS, subversion, trac ...)
- Database programming Mysql, Sqlite, ADO, ODBC, JDBC, design and management of relational databases.
- Freelance WebMaster. Developing web pages with different technologies (php ...). Adherence to W3C standards. XML, XSL transformations. CSS, XHTML, DTD.
- Experience programming security tools: intrusion detection, cryptographic functions (OpenSSL).
- Advanced knowledge of the TCP / IP and Internet protocols (SNMP, SMTP ...). Knowledge of network programming libraries in low-level (IPQ, iptables ...)
- Programming PICs and microcontrollers in C and assembler.
- Programming in SAP environment
- Software Packaging (SUSE, Red Hat, Debian, rpm, deb ...)
- Optimization software: OProfile, gprof, vmstat
- Web development: JAVA, GWT, SMARTGWT, Hibernate

Systems
- OS: Windows 9x, Windows NT, Windows 2000, Windows XP, Linux, Unix, Solaris, FreeBSD, OpenBSD, NetBSD, AIX ... (Experience as administrator and developer).
- Server Management: mail (postfix ...), DNS (bind ...), Samba, NFS, Messaging (jabber), fax (hylafax ...) Databases (Mysql, Postgress ...), http (apache ...), application servers (tomcat, oc4j, IAS), network management (CA Unicenter, Nagios), LDAP, sar, backups (faubackup, legato ...), document management (mydms. ..) code repository (subversion, trac ...) system-imager, snoopy, sql server, tomcat, IAS, oc4j, MicroStrategy, liferay, php, apache, mysql, oracle, db2, GoogleSearch, virtualization, xen, qemu, linux virtual server; chroots, dns bind, sar, heartbeat, snmp printer queues.
- Experience in network security, attacks, compromises, hacking. Security tools (scanners, sniffers, tripwire, snort ...)
- Databases, SQL (Microsoft Access, Mysql, Postgress, SQL Server ...) administration and programming.
- Planning and Implementation of telecommunication networks: LAN, WAN. Configuration of routers, tunnels, firewall.

Electronics
- Simulation and design of analog and digital electronic circuits (Orcad, PSpice, Workbench)
- Programming logic devices (VHDL, MaxPlusII)

Applications
- Mathematical and statistical applications. Digital Signal Processing (MathLab, Simulink, Mathematica, SPSS, Octave)
- Design: 3DStudio, Microstation.
- Programming of controllers with Step 7.0
- Advanced office applications (Microsoft Office VBA, Gnome Office, KDE Office, OpenOffice ...)

Hardware
- **Architectures** 368, x86_64, IA64, sparc
- **Hardware**: IBM, Intel, Blade, Bull, Novascale, Raritan, fiber optic cab Hitachi, EMC, Qlogic, SunBlade
- Installation and repair of PCs and servers.
- Electronic communications (RS-232, Ethernet, modem)

Other
- Teaching and training for companies: As a teacher programming courses, (C++, Java), maths and physics, IT courses to managers on companies.

Observations
- Highly creative, with the ability to solve complex problems and find optimal solutions by building architectures, designing and implementing them, leading and coordinating teams.
- Keen on open software, programming and IT. Because of my interest in the world of software, communications, telecommunication networks, computing, security and related areas I have the ability to learn new systems and programming languages in no time.
- Enjoy team work and team coordination.

Other data
- Languages: English and Spanish

REFERENCES AVAILABLE