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Curriculum vitae

PERSONAL INFORMATION

Carlos Crisóstomo Vals

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Sex Male | Date of birth 08/12/1981 | Nationality Spanish

PERSONAL STATEMENT

I am an Engineer with more than 25 years of experience in Open Source and GNU/Linux systems specialized in Artificial Intelligence, Cybersecurity, Embedded Systems and Project Management looking for new professional challenges in any of these fields that represent a technological challenge.

WORK EXPERIENCE

2000–2001 Software developer

Join Free Business SL, Madrid (Spain)

Junior Developer in training in the development dept. at Join Free Business S.L.

- Application development under PowerBuilder 5 with Sybase SQL/Oracle databases for insurance and marketing/advertising sectors.
- Remote, local and phone technical systems and networking support.

2004–2005 IT Systems Internship / Grant Holder

Unisys Consulting Spain, Madrid (Spain)

Internship in corporative systems infrastructures and architectures in the Open Source Systems Dept. of Unisys Consulting.

- GNU/Linux and Solaris administration.
- Oracle and MySQL database management.
- Systems and networking monitoring.
- Business Intelligence (Business Objects).

2005–2006 ICT system administrator

Unisys Consulting Spain, Madrid (Spain)

Technical system consultant for the open source systems area of Unisys Consulting.

- Systems administration, setup and management.
- Systems monitoring.
- Data warehouse and Oracle databases.
- Business intelligence.

2005–2008 ICT system analyst

Telefónica Group (TD/TdE/TME), Madrid (Spain)

Working at different areas in the Telefonica Group through Unisys Consulting :

- Telefónica Data -> Project Development Dept.

- Telefónica de España -> Security Management Area

- Telefónica Móviles -> Security Tools & Production Support Management Area

- Company's Central Security System Support and Maintenance (formerly Telefónica Data) in the Security Management Area of Telefónica de España (later Telefónica Móviles).
- Advanced User Administration and Management with LDAP in SUN Solaris environments and BEA Weblogic.
- Technical simultaneous projects related to Security Management Area: firewall management, IDS, intrusion tests (White Box / Black Box), security auditing and forensics analysis.

2005–2008   ICT system analyst

Unisys Consulting Spain, Madrid (Spain)

System analyst consultant, being part of the open source systems area of Unisys Consulting.

- Internal projects related to the area: servers administration, monitoring services, Oracle (11g/RAC Clustering) database setup, virtualization servers, among others.
- Internal training for company's employees about GNU/Linux and Solaris system administration, networking, virtualization (VMware Server / Workstation), cyber-security, and clustering databases (Oracle RAC/ClusterWare).

2006–2009   Technological Expert Panelist Collaborator

TNS Global, Madrid (Spain)

Panel member of TNS Global group technological experts' panel for Telefónica Group.

- Test and research of mobile terminals and services in mobile industry, Internet and new technologies.

2010–2010   Training Collaborator

CICE, Madrid (Spain)

Collaborator in training at CICE (Escuela Superior de Nuevas Tecnologías CICE).

- Collaborator in training for the Master's Degree in GNU/Linux systems administration.

2008–2011   IT Systems Technical Manager / Systems Analyst

Sistemas Avanzados de Control (SAC), Madrid (Spain)

Main responsible of the company's IT systems, networking and security setup, management, implementation and administration.

- Security audits and forensic analysis for embedded control and protection systems.
- Internal training for company's employees for both my own team and other development groups within the company related to setup, implementation and administration of GNU/Linux systems.
- Systems and communications Consultancy and Support for Embedded GNU/Linux control and protection projects.

2011–2012   Head of Operating Systems D&D / Project Manager

Sistemas Avanzados de Control (SAC), Madrid (Spain)

Technical Manager in charge of the design, development, support and implementation group of custom-made GNU/Linux operating systems for control and protection embedded systems.

- Linux kernel developer : Booters, drivers and kernel modifications, file systems, real-time support design and development; quality specifications, test protocols, cyber security standards, and R&D of the latest related technologies.
- Development's group project management, programming, budget elaboration, implementation, monitoring and evaluation.
- Technical software responsible of different projects related to embedded operating systems development.
- Systems and communications Consultancy and Support for Embedded GNU/Linux control and protection projects.
- Security audits and forensic analysis for embedded control and protection systems.
- Internal training for company's employees for both my own team and other development groups within the company related to setup, implementation and administration of GNU/Linux systems

2012–2015   Technical director

Arteche Smart Grid, Madrid (Spain)

Technical director of the embedded operating systems design and development in the product development area.

- Member of several group committees related to quality regulations, process definitions, technical consultancy (HW/SW/FW/SO) and logic security.
- Development of procedures, technical instructions and configuration management systems related to the operating quality of my department.
- Procedures development and methodologies focused on my department operation.
- Development of the version control procedure, code analysis and metrics of the software components and documentation used in my team.
- Evolutive development of the GNU/Linux unified virtual platform environment for BSP and embedded software development for ARM Cortex (armel/armhf), PowerPC, Intel (x86/x86_64) and ColdFire (m68k) hardware platforms.
- Study, definition and implementation of the logic security infrastructure and operating systems hardening procedures aligned with the major cybersecurity standards for Industrial Control Systems (NERC-CIP and IEC-62351) .
- Project Management using the PMP (PMBOKv5) methodology.
- Company training for Project management methodologies based on PMP (PMBOKv5) and support tools (MS Project MCTS 77-178).

2015–2017   CEO / Founder

EthelHub, Madrid (Spain)

Founder and partner of the Cybersecurity Startup EthelHub S.L. in TechHub (Google Campus Madrid).

- Responsible for the business strategic plan, quality control, production, finances and technological infrastructure.
- Pentesting and vulnerability assessments for server / embedded systems, web and mobile apps.
- Forensic analysis and data recovering.
- Inari StartUp project: AI-based Intrusion prevention system using Machine Learning with Bayesian models (LDA) in Cloudera architecture (Hadoop+SparkML+Python).

2018–2018   Training Collaborator
MIOTI, Madrid (Spain)

Professor of the course "Security for IoT" - Ecosystem Module.

2015–Present **GNU/Linux Embedded Systems Expert**

Freelance

- Regularly cooperation with Case On IT, S.L. to develop together embedded operating systems in sounding lines for data gathering, logic security and some related Android systems.
- Cooperation in several projects related to low level GNU/Linux and Android embedded systems.
- Expert in GNU/Linux and Android embedded operating systems, project management, driver development and Kernel, cyber-security and reverse engineering under Intel x86/x86_64, PowerPC and ARM architectures.

2019–Present **Founder and Working Engineer in AI / Cybersecurity / Embedded Systems**

Xift.ai (Xift OÜ)

Founder and working engineer of the technology consulting firm xift.ai, specialized in the fields :

- Artificial intelligence : Data Science, Machine Learning, Deep Learning and Edge AI.
- Cybersecurity : Defensive Security, Ethical Hacking and Pentesting, Security Audits and Dedicated Security Hardware.
- Embedded systems : Hardware, Drivers, Operating Systems and Edge Computing.

EDUCATION AND TRAINING

2000–2012 **Technical Engineering in Computer Systems** EQF level 6

Universidad Pontificia de Salamanca - Campus de Madrid, Madrid (Spain)

List of subjects studied :

- Representation and processing of information
- Programming I
- Circuits and Digital Systems
- Algebra
- Mathematical Analysis
- Fundamentals of Programming I
- Operating Systems I
- Technical English
- Fundamentals of Computers
- Programming II
- Religious Fact and Christian Faith
- Controllers, Peripherals and Interfaces
- Fundamentals of Programming II
- Discrete Mathematics
- Object Oriented Programming
- Operating Systems II
- Open Operating Systems
- Teleinformatics
- Data Transmission
- Man Machine Interaction

- Programming Technology
- Data Structure
- Languages and Scientific Programming
- Microprocessors
- Social Doctrine of the Church
- Statistics Systems
- Communications Devices and Protocols
- Systems Programming
- Programming Methodology
- Databases I
- Artificial Intelligence and Knowledge Engineering
- Ethics and Computer Law
- Databases II
- Physical Fundamentals of Computer Science
- Theory of Automata and Formal Languages
- Local and Metropolitan Networks
- Software Engineering
- End of Degree Project

Studies migrated to Degree in Computer Engineering

2014–2014   **MPM (Master of Project Management) Degree in PMP - PMBOKv5**
CAS Training, Madrid (Spain)

List of subjects studied :

- Introduction and first concepts
- Process groups and knowledge areas
- Project Integration Management
- Scope management
- Project time and deadline management
- Project cost management
- Project quality management
- Management of the human resources of the project
- Project communication management
- Project Risk Management
- Project procurement management
- Stakeholder management
- PMP Exams Practice

2014–2016   **Computer Engineering Degree**   EQF level 6
Universidad Pontificia de Salamanca - Campus de Madrid, Madrid (Spain)

List of subjects studied :

- Algebra
- Fundamentals of Programming I
- Fundamentals And Computer Technology

- ■ Mathematical Analysis
- ■ Physical Fundamentals of Computer Science
- ■ Religious Fact And Christian Faith
- ■ Oral and Written Expression
- ■ Introduction to Operating Systems
- ■ Fundamentals of Programming II
- ■ Programming Languages
- ■ Business Economics
- ■ Christian Vision Of Man And Society
- ■ Autonomous Learning Techniques
- ■ Algorithms and Data Structures
- ■ Fundamentals of Communications and Networks
- ■ Fundamentals of Human-Computer Interaction
- ■ Program
- ■ Application Programming
- ■ Database Systems I
- ■ Operating Systems
- ■ Analysis and Design of Information Systems
- ■ Statistics
- ■ Fundamentals of Software Engineering
- ■ Database Systems II
- ■ Mobile Technologies
- ■ Computer Architecture
- ■ Project Management
- ■ Theoretical Computing
- ■ Local and Metropolitan Networks
- ■ Software Engineering: Web
- ■ Artificial Intelligence
- ■ Operational Research
- ■ Ethics and Computer Law
- ■ Knowledge Management
- ■ Economic Engineering
- ■ Mobile Services Development
- ■ Innovation Management
- ■ End of Degree Project

2016–2018   **MSc (Master of Science) Degree in Cybersecurity**   EQF level 7

Universidad Internacional de La Rioja (UNIR), La Rioja (Spain)

- ■ Legal and Regulatory Aspects
- ■ Network Security
- ■ Cryptography and Security Mechanisms
- ■ Vulnerability Analysis
- ■ Legal Risk Analysis
- ■ Security Audit
- ■ Security in Online Applications and Databases
- ■ Computer Crimes

- Internship in Company
- End of Master's Degree Project

Not finished

| 2018–Present | **MSc (Master of Science) Degree in Artificial Intelligence** | EQF level 7 |

Universidad Internacional de La Rioja (UNIR), La Rioja (Spain)

- Artificial Intelligence Research
- Cognitive Neuroscience
- Computational Perception
- Automatic Reasoning and Planning
- Machine Learning
- Artificial Cognitive Systems / Deep Learning
- Natural Language Processing
- Internship in Company
- End of Master's Degree Project

PERSONAL SKILLS

Mother tongue(s) Spanish

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	B2	B2	B2
French	C2	C2	B1	A2	B1

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

Communication skills Good communication skills acquired through my years of entrepreneurship and team management.

Organisational / managerial skills Good organizational and management skills acquired in my years as an entrepreneur and CEO in the different companies I have founded.

Good leadership capacity acquired in my years as technical director with multiple teams in different locations.

Good project management skills acquired in my years as a project manager and my MPM education program.

Job-related skills Skills for both technical and management training.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

Driving licence B

ADDITIONAL INFORMATION

Present and Past Memberships

- Project Manager Institute (PMI)
- Project Manager Institute (PMI) Madrid, Spain Chapter
- Institute of Electrical and Electronics Engineers (IEEE)
- Institute of Electrical and Electronics Engineers (IEEE) Spain Section
- Linux Foundation (LF)
- Free Software Foundation (FSF)
- EuropeanScrum.org
- OWASP Foundation
- OWASP Foundation Madrid, Spain Chapter
- Asociación Española de Inteligencia Artificial (AEPIA)
- European AI Alliance (European Commision)

Courses

Artificial Intelligence

- Machine Learning (*Standford University, Coursera*)
- Machine Learning with TensorFlow on Google Cloud Platform Specialization (*Google Cloud, Coursera*)

Cybersecurity

- Cyberwar : Advanced Offensive Cyber Operations (*StrategicSec*).
- DFIR and forensic analysis on mobile phones (*Securízame*)
- Ethical Hacking presential training (*Securízame*)

Embedded Systems

- VHDL Introduction (*Xilinx*)
- Introduction to the Zynq architecture with Vivado HDL (*Xilinx/Silica*).
- Booting-time speed up and optimization under GNU/Linux embedded systems (*Montavista*).
- Embedded systems design under GNU/Linux in ARM9 platform (*Atmel*).
- Real-Time operating systems design (*EBV Elektronik/ULMA Embedded*).

Management

- SCRUM & SCRUM Master Training (*Xsfera*).
- Digital Marketing for StartUps (*TechHub*).
- Marketing 101 (*University of Pennsylvania, Coursera*)
- Lean StartUp and Design Thinking (*Google Actívate Program*).
- Lean Management – Kaizen Workshop (*Asenta Consulting*).

Systems Administration / DevOps

- Enterprise virtualization under VMWare y VMWare Server (*Unisys Consulting*).
- SUN Solaris administration, basic and medium grade (*Telefónica de España*).
- Official Docker Training (*Docker Inc.*)