

## 1. Personal Data

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- Josep Sanz Campderrós.
- Born in Barcelona on December 7, 1976.
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## 2. Academic training

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- Computer Engineer (UPC).
- Degree of Computer Applications Development.
- Technician in Telecommunications Electronics.

## 3. Other courses and seminars

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- AutoCAD basic course
- Driving license B1
- Seminar on computer network security
- Distributed Java Programming with CORBA
- ALTERA's FPGA Seminar
- Seminar Echelon - LonWorks
- Law enforcement Seminar on Data Protection (Spanish LOPD).

## 4. About me

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- Throughout my professional career I have carried out R+D+i tasks (Research, Development and Innovation).
- I have been working in Unix and GNU/Linux environments for 25 years, I have participated in process automation and big data processing projects (OpenROCS, motor control and astronomical telescopes), backend and frontend development (SaltOS, RhinOS and custom apps for web and desktop) and programming for embedded systems (Altera, Xilinx, Arduino and Raspberry pi).
- In the Wide Spectrum Software Solutions business project, I directed the [SaltOS](#) and [RhinOS](#) projects, as well as their release under the GPL-3.0 license, currently I continue developing on these projects.

- I have been a member of the board of directors of CatPL, the association of Catalan Free Software Companies, and I have given talks on free software.
- I have worked in research environments such as the Institut d'Estudis Espacials de Catalunya and the Univ. Politècnica de Catalunya, Dept. of Applied Physics.
- In the last years I have carried out tasks of optimization and automation of processes in the logistics sector, using algorithms such as STRIPS and languages such as PDDL.
- I have published a repository at [github](#) with a web of scores and audios for gralla at [gralla.josepsanz.net](#)
- I have also contributed to free software projects such as phpMyAdmin, Mroonga, MuseScore, PHP, jQuery-UI, jquery-timepicker, TCPDF, WarnockPDF, root-ro, handsontable, masonry, hhvm, jGrowl, sqlite-for-piwik, webapp-xul-wrapper, php-osx, jsmin-php, jquery-grab-bag, pdf.js, Columnizer-jQuery-Plugin

## 5. Keywords

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- Operating systems: GNU/Linux, Unix Solaris, HP-UX, Slackware, Centos, Debian, Ubuntu, RedHat, Fedora, LAMP, Microsoft, Raspbian
- Databases: MySQL, PostgreSQL, Oracle, SQLServer, MariaDB
- Services: Samba, Apache, FTP, HTTP, SSH, Crontab
- Programming: Visual Basic, Visual C++, C, GTK, PHP, TCSH, TCL/TK, Latex, Embedded Visual C++, Shell Scripts, Python, C++, .NET, XSLT, ANSI C, MONO, WEB, HTML, JavaScript, CSS, Ajax, Vanilla JS
- Programs: Wordpress, EzPublish, VLC, Snort, GIS, Adobe OnSiteView, TomTom, JQuery-UI, Bootstrap, TinyMCE, CKEditor
- Embedded: PLC, FPGA, Altera, TETRA, PDA, NIOS, Xilinx, MicroBlaze, LEON3, Firmware, Raspberry PI, RPI, RTOS
- Projects: SaltOS, RhinOS, OpenROCS
- Licenses: GPL, MIT, BSD, Open Source, Free Software
- Logistics: CitasWEB, Maps, Rutas, Transfers, Tracking, Última milla, Entregas, Logística inversa, Recogidas, B2B, B2C, C2C, Orders, Parcels, IA, Call Center, ERP, CMS, OCR, QR, Codebar
- Protocols: TCP/IP, UDP/IP, SSL, Webservice, REST, SNMP, NMEA, RFID, DMA, SOAP, DHCP, API, SMS, Email
- Integration: CSV, Excel, XML, Bytes, EDI, PDF, JPEG, TIFF, XML, RSS, ATOM, JSON
- Technologies: Bluetooth, GPS, Ethernet, GRPS, WIFI, RS232
- Quality: Unit test, Validation test, Cantata, Bazaar, Subversion, Git, phpcs, phpunit, phplloc, phpmd, phpdoc
- Astronomy: Vaisala, INDI, Rain detector, Previstorm, Cloud Sensor, Davis Weather Station, PbCdL-Comm, XmCCD, IndiCCD, Andor, Finger Lakes Instruments, APOGEE, APC, ROS, SBIG, Meade Telescope, Baader Dome, Allsky
- Others: Reports, Real Time, Oscilloscope, LOPD, Frontend, Backend, Parser, MVC, Mailing, Online, E-Learning, SDK, Auditoria, DoS

## 6. Professional experience

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### 6.1. Independent professional (Since 2022)

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Developments for GNU/Linux and evolutes in the SaltOS and RhinOS projects:

- RhinOS and SaltOS evolutions to run on PHP 8.2-8.3 + third-party library updates.
- Development of the new SaltOS v4 framework: backend in PHP, frontend in JavaScript, API based on REST and JSON requests.
- Migration of SaltOS Server from CentOS 7 to Debian 11-12.

### 6.2. AB Custom Transports & Logistics, S.L. (2019-2022)

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Developments for GNU/Linux environments and integration of SaltOS in all business areas:

- Last mile mobile application for drivers, to operate even without internet.
- Route optimization using AI and online appointment automation.
- Integration of SaltOS in all the business areas of the company.
- SaltOS connection with the company's old ERP (SQLServer).
- Documentation recognition systems using OCR, bar codes and QR codes.
- Automation of processes using embedded systems based on Raspberry PI.

### 6.3. Institut d'Estudis Espacials de Catalunya (2011-2019)

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Developments for GNU/Linux environments to control robotic telescopes:

- Development of OpenROCS 2.0 (GPL-3.0 license), control software used by the TJO and SQT telescopes.
- Development of the [www.oadm.cat](http://www.oadm.cat) for the divulgation of the TJO telescope, the [www.ice.csic.es](http://www.ice.csic.es) for the ICE and the [www.ieec.cat](http://www.ieec.cat) for the IEEC.
- Development of the MUR application: an online software for sending astronomical proposals.
- Fork of the IndiCCD project to allow the control of multiple Andor cameras.
- User interface and control system for the SQT telescope, the Allsky camera and the IEEC-CSIC telescope.

### 6.4. Wide Spectrum Software Solutions (2007-2011 in R+D Dept.)

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Developments for GNU/Linux, MONO, Firmware, PDAs and web environments:

- Development of the SaltOS and RhinOS projects released under the GPL-3.0 license.
- Project for the NTE/ESA to do some parts of the unit-test of the LISA Pathfinder project.
- Project for the IEEC to make improvements in the GOLD-RTR project (v2 and v3).

- Multiple web projects (portals and online shops) to different customers.

### **6.5. Enfasystem (2006-2007 in R+D Dept.)** ---

Developments for WEB using LAMP environments (Linux+Apache+MySQL+PHP):

- Improvement of the 'admin' control panel
- Development of the 'mecano' project
- Development of the DBMailer project
- Several collaborations with IEEC for the PARIS and GOLD-RTR projects

### **6.6. Ingeniería de la Información, IN2 (2005-2006 as team's chief)** ---

Software development for GNU/Linux and Windows CE.

- Use of security tools like Snort.
- Programming of mobile devices using EVC++ 3.0 for PDA devices
- Programming in C, PHP, .NET
- Use of DBMS such as MySQL, ORACLE

### **6.7. Institut d'Estudis Espacials de Catalunya (2001-2005)** ---

Development of software for UNIX environments.

- Design and implementation of hardware and drivers.
- Planning and implementation of software for various projects.
- Programming in C with GTK, Tcl/Tk on Unix tcsh.

### **6.8. Univ. Politècnica de Catalunya, Dept. of Applied Physics (1999-2001)** ---

Administration of Unix Systems and Microsoft Windows

- Implementation of network security systems (SSL)
- Security audits for the computer systems of the department
- Software development and maintenance of the department's intranet
- Software development for the Generalitat de Catalunya (SIGMA and NivAval)
- Collaborations with the WAFAE association.
- Support to users, and so on.