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# SOFTWARE ENGINEER FOR EMBEDDED SYSTEMS

Position: Engineering in embedded systems (Software & Hardware)

I'm a graduate in software with knowledge in telecommunication and electronics. My aim is to carry through embedded systems that I particularly appreciate in. Therefore, I would like to participate in such projects inside a dynamic team. My enthusiasm to work in this field, my interest for software & electronics and my job experiences where I have worked in the whole V-cycle practically, make me a good candidate for a position in a supplier company of embedded systems in terrestrial vehicles.

## Work experience

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Since  
May 2009

### Software test engineer

**Mission:** The mission consists to test Boeing air management system design for air supply control system and cabin air conditioning & temperature control system.

**Means:** - Tests specification redaction

- Automatic tests (scripts)
- Manual tests (functional tests)
- MIP tests (hardware failures procedures)
- Results tests analysis
- Errors investigation
- Tests update

Software: SmarTeam, Scade, Trace32, CANalyser, A429BAST+, PCAN-Explorer

Liebherr software & hardware: SITS, PCIT & HISB

Device: IASC: Integrated Air System Controller, IASC bench, DATATRAC400H

Bus: CAN, ARINC

**Appraisal:** Software tested for several customer deliveries.

May 2008  
March 2009

### **Embedded software engineer for ESP functionalities.**

**Mission:** My mission is to develop and update existing functions for a new target in a new development environment with better quality. Those functions are in relation with the vehicle braking device.

**Means:** - Specification evolution and synthesis.  
- Creation and maintainability of function design.  
- Creation, modification and review of code design and code.  
- "Open loop" and "Closed loop" simulation: specification, realization and report.  
- Test bench: specification, realization and report.  
- Files integration in configuration management software.  
- Specification of car tests.

Operating system: Windows 2000 and XP.  
Tools: DOORS, X-Metal, ASCET, LABCAR, MM6X, JIX.  
Language: C  
Standards: V process.  
Environment: English

**Appraisal:** - Migration of functionalities.  
- Delivery for first clients.

January 2007  
May 2008

### **Embedded software engineer for engine control unit**

CONTINENTAL(SIEMENS VDO) "PED" – Toulouse (France)

**Mission:** The aim of this mission is to update and integrate new features of engine control unit for a famous French vehicle manufacturer.

**Means:** - Check specifications consistency.  
- Design and development of specifications.  
- Unitary tests and tests on benches.  
- Integration phase with tests.  
- Errors investigation and correction.

Operating system: Windows XP  
Tools: X32, TD3, TD3e, DDS, EMS2010 \ RTRT, Trace32, INCA, CANalyzer, ETAS, CARTS, GSP \ ESI, PVCS, IMES++.  
Language: C  
Standards: V process, CMMI(3).  
Environment: French - English

**Appraisal:** - Evolution contribution of engine control unit software, principal organ, vital and critic for the vehicle.  
- satisfaction of the client regarding the continuity of good results.

March 2006  
August 2006

## **Engineer in antenna's behavior for automotive application**

SIEMENS VDO "Chassis & Carbody" – Toulouse (France)

**Mission:** Training period:

Creation of an antenna modeling for a Tire Pressure Monitoring System to enhance and validate RF performances.

**Means:** Research; Antenna characterisation; Creation, test and validation of virtual antenna in 3D.

Operating system: Windows XP.

Tools: HFSS, Ansoft Designer, anechoic chamber, GTEM (Gigahertz Transverse Electromagnetic) test cell, network analyser, spectrum analyser, Wheel's unit of the TPMS (Tire Pressure Monitoring System).

Environment: French.

**Appraisal:** Creation of a antenna model for a base of further studies.

March 2005  
September 2005

## **Software engineer for vehicle engine test bench environment**

SIEMENS VDO "Powertrain" – Toulouse (France)

**Mission:** Training period:

Evolution and improvement of an artificial logic software for engine test benches to enhance engines tests and time.

**Means:** - Listening of needs users.

- Design, development, test and integration of software modification.
- Elaborating and presentation of the added features.
- Work within a team of 16 persons.
- Presentation of the new software version.

Operating system: Windows XP.

Tools: Visual Studio, API Win32 real time OS, MS Project.

Language:C

Environment: French.

**Appraisal:** Software robust and auto-adaptive, safeguarding information of bench environment, safeguarding information of defaults during test bench, displaying errors with more details to surround defaults origins, software integrated in the security process, software integrated on all engine benches, Software integrated on all engine benches.

March 2004  
March 2004

## **Software developer**

UMR 5150 TOTAL-CNRS-UPPA - Pau (France)

**Mission:** Software creation for an intelligent sensor for the pressure and temperature of a fluid.

**Means:** Research, contact / Specification, development, tests and software validation.

Tools: Visual Basic, Excel (macro), Digital oscilloscope, KELLER intelligent sensor, RS232 standard.

**Appraisal:** Software with data backup against failures, gain of time and measurement costs.

July 2002  
August 2002

### **Embedded system technician for motorcycle application**

Personal project

**Mission:** Creation of a driving assistance for a motorcycle to enhance more safety.

**Means:** Studies / Spec, dev, test, validation and integration / Software and hardware(analog. & num.).

Tools: Keil, Microsim, AT89C2051, PCF, assembler, I<sup>2</sup>C bus, alpha-numerical display, motorcycle (500cc).

Language: Assembleur 51

Environment: French.

**Appraisal:** Warning, anti-fog, alarm. itinerary, date, time and driving time.

April 2002  
July 2002

### **Embedded software technician**

DIPO (individual lost objects detection device) – Montpellier (France)

**Mission:** Optimisation of the human machine interface of an embedded device.

**Means:** Components and communications studies, coding and functional tests.

Tools: IAR, C, ASM, µC MSP430, SDCard, Graphical displaying, Digital oscilloscope, SPI liaison.

**Appraisal:** Software adapted for the new keypad and the new graphical displaying. Study report of a SDCard communication.

## **Diplomas and education**

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September 2005  
March 2006

### **Université de Bretagne Occidentale**

Studies of several systems of communication:  
Hertzian (GSM, UMTS, radar)  
Submarine network (sonar)  
Network (Ethernet)  
Optical.

Modulation OFDM, TDMA, CDMA, SDMA, FH & DS-FDMA, ... .  
Management of company

**Area of specialisation:** Master's Degree – Electronic of communicating systems

September 2002  
March 2005

### **Université de Pau et des Pays de l'Adour**

- Real time systems, computer engineering
- Analogical and digital electronics
- Waveforms, wireless communication
- Physics for electronics, automation
- Power electronics and engine control
- World of companies and law for companies

**Area of specialisation:** B.Sc + Post Graduate Certificate in Electrical Industrial Computer Engineering

September 2000  
May 2002

### **Université de Montpellier II**

- computer engineering
- Analogical and digital electronics
- High frequency, Automation
- Company set up

**Area of specialisation:** 2-year technical qualification in Electrical Industrial Computer Engineering

## Computing skills

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### Software

Refer to "Additional information"

### Languages

Refer to "Additional information"

### Additional information

- Database: Clearquest, IMES++, TCM, ESI, PVCS, JIX.
- Specification & Design: DOORS, X-Metal.
- Development: ASCET, TD3, TD3e, X32 ; Visual Studio C++ .NET, Keil 51, Matlab, Simulink, ADS, Ansoft Designer, Labview, Mentor graphics, PSpice and Orcade, HFSS, Momentum, Mefisto, Max C++ II altera, Turbo C, IAR Embedded WorkBench, Visual Basic.
- Test: ASCET, LABCAR, EMS2010, RTRT, Trace32, INCA, CANalyzer, ETAS, CARTS, GSP.
- Electronics: ADS, Ansoft Designer, Mentor graphics, PSpice, Orcad, Microsim, AT89C2051, AT89C8051, PCF, EEPROM.
- Telecommunication: ADS, Momentum, HFSS, Matlab, Mefisto.
- Language: C, assembler (51, MSP430 (Texas Instruments), 68(Motorola)), VHDL, VHDL\_Ams, Basic

## Language skills

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### English

**Speaking competence:** Fluent, **Written competence:** Fluent

### French

**Speaking competence:** Native speaker, **Written competence:** Native speaker

## Various

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### Leisure:

Electronic conception, motorcycling, nature, music & sounds.

### Sports:

Volleyball, swimming, running, archery