José Manuel Sandoval Chávez

E-mail: j_sandoval_chavez@hotmail.com
www.linkedin.com/in/jmsandovalchavez
Web: webcv **Mobile:** 33 1046 6402

Education

- **Electronics Engineering**
  Instituto Tecnológico de Estudios Superiores de Occidente (ITESO).

2009 - 2014
Mexico

Summary

Software engineer with experience in embedded systems and software development, committed to develop good quality software and accustomed to good practices and processes of software engineering.

I consider myself a disciplined professional with a high motivation for learning about new technologies.

Professional Experience

Intel – Non-Volatile Storage Group (NSG)
System Validation Engineer

2019 – Present
Mexico

The team is focused on the validation of Non-Volatile mass storage Intel products. My role involves the creation of test content, implementing test cases, debugging test content failures and supporting the automation framework used for validation.

Intel - Network Platforms Group (NPG)
Software and System Validation Engineer

2015 – 2017
Mexico

The team was focused on the enabling and validation of a hardware accelerator module, used for compression, encryption and cipher operations, which is part of high-performance server products/processors. As part of the team my main focus was helping on the creation of device drivers and software in C/C++ and Python that could enable an OS to use and validate this specialized hardware accelerator module.

My main role was as a C/C++ SW developer responsible of supporting the existing software projects and applications used for validation besides developing new SW modules to enable features and new validation use cases.

Freescale - Audio and Accessories Software Development Group
Embedded Software Engineer

2014 - 2015
Mexico

The team was focused on developing software for audio applications and also on enabling the creation of general smartphone consumer accessories. During this period, I worked on the following projects:

- Homekit over Bluetooth Low Energy (BLE) software stack for Freescale's microcontrollers. I was part of a team developing a software stack that could enable the creation of home-automation accessories intended to be controlled by Apple devices using BLE as a transport.

- Freescale Connected Audio Solution Project which intended to provide a software stack to create consumer audio accessories. In this project I was responsible for integrating and supporting a software stack that enabled the communication with Apple devices.

Freescale - Audio and Accessories Software Development Group Internship

2013 - 2014
Mexico

The main project was to develop a software stack that could interface Freescale's microcontrollers with any iPod, iPad or iPhone over USB using MFi (Made For iPod) protocol to enable the creation of audio or general-purpose accessories. A solution that interfaced these devices and supported the creation of bare-metal and RTOS applications was successfully implemented.

Knowledge & Skills

- **Programming languages:**
  - Decent knowledge and professional experience in C, C++ and Python.
  - Fundamental knowledge in, Java, JavaScript, HTML5, MATLab, SQL, and Assembly.
- Software Design, Development and Debugging.
- Object Oriented Programming Fundamentals.
- Linux fundamentals, Makefiles and recipe creations, Bash and scripting basics.
- Embedded Systems and Microcontrollers.
- Real-Time Operating Systems (RTOS) Fundamentals.
- Digital Design and Hardware Description Languages (HDLs) Fundamentals
  - Verilog and SystemVerilog
- Full-stack Web Development Fundamentals (MEAN Stack).

- **Software Development Tools:**
  - Git as a revision and version control system.
  - Docker for applications development and deployment
  - Jira, Crucible, Phabricator and other tools for bug tracking and code review.
  - IDEs (Eclipse, MS Visual Studio...) and command line tools for code development (`vim`)
  - Debugging tools like `gdb` and documentation generator tools like Doxygen and `pydoc`.

Languages

- Spanish (Native).
- English (Fluent).

Academic & Personal Projects

- **www.pepedocs.com:** Blog style webpage for my personal notes, front-end implemented using HTML5 and jQuery and back-end implemented with Node.js

  2018

- **Automatic Vehicle Location System (AVL)**
  Based on an 8-bit microcontroller and a GPS module.

  2014

Awards & Certifications

- Participant in the Worldwide Freescale Cup
  Autonomous Intelligent Car Race

  2014
  South Korea

- Second Place Winner of the Freescale Cup
  Autonomous Intelligent Car Race

  2013
  Jal, Mexico

- LinuxFoundationX FS101x.2: Introduction to Linux   **2015** - edX
- Microsoft DEV210.3x: Advanced C++
- HarvardX CS50: CS50's Introduction to Computer Science   **2018** - edX
- UTAustinX UT.12.01x: Real-Time Bluetooth Networks - Shape the World
- UTAustinX UT.6.20x: Embedded Systems - Shape the World: Microcontroller Input/Output & Multi-Threaded Interfacing