Leonardo Sandoval

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Education

◇ **Instituto Nacional de Astrofísica, Óptica y Electrónica**
MS in Computer Science. Thesis defended in January 2005.

◇ **University of Guadalajara**
Diploma in Computer Science, August 1998.

◇ **Scholarships**

· Mexican-French Scientific Agreement (ANUIES-ECOS). January – December 2003.

· Mexican Science Sponsor (CONACYT). January 2001 – December 2002.

Work experience

◇ **Intel**

· **Cloud Software Engineer** (October 2018 – present)
Member of the **Software Stacks** team, providing specialized and optimized Clear Linux reference stacks. Leo is one of the Integration Architects and has lead the Data Analytic Reference Stack (DARS) and the Media Analytic Reference Stack (MERS), from design to release.

· **PnP Software Engineer** (December 2017 – October 2018)
Member of the **Power and Performance** team which is part of the Clear Linux team. Leo's contributions focused on *GNU C library*, adopting AVX2 technology for *strcmp* and *strcpy* string routines. Leo's contribution to the latter project can be found at GNU C Library patchwork.

· **Embedded Software Engineer** (February 2015 – December 2017)
Member of the core Yocto Project Team providing support on openembedded-core and bitbake projects. Leo's contribution to the openembedded-core project can be found at OE-Core patchwork. Main maintainer of patchtest, framework and test suite for openembedded-core community patches.

◇ **Freescale**
July 2012 – February 2015

· **Embedded Software Engineer - Professional Services Consultant** (April 2014 – February 2015)
Board Support Package (BSP) development and support for `i.MX` Multimedia Processors. Direct support to US customers for all Software Stack, from boot loader to user space applications.

· **Embedded Software Engineer - Field Application Engineer** (July 2012 – April 2014)
Customer support for clients located in the USA Central Region and México using `i.MX` Multimedia Processors, with main focus on issues raised from software coming from the `meta-fsl-arm` layer, the openembeded BSP layer for the `i.MX`. During this period, the company moved from a in-house Linux Distribution builder (`ltib`) to the Yocto Project where Leonardo played a fundamental role in the community.

◇ **Texas Instruments - Dextra Technologies**
August 2006 – June 2011

· **Embedded Software Engineer** (August 2007 – June 2011).
Creating and maintenance of GStreamer plugins for the `OMAP` family processors. Plugins based on TI `OpenMAX` IL multimedia interface. Maintainer of the camera and video encoder plugins.

· **Embedded Software Engineer** (August 2006 – August 2007)
Software developer for the `OpenMAX` IL Camera component for `OMAP2` family processors.

ACADEMIC EXPERIENCE

◇ **Tecnológico de Monterrey campus Monterrey**

· **Software Embedded** (August 2014 – November 2014).
A *Embedded Linux Software* course imparted on the Department of Master of Electronic. Topics covered: cross-toolchain, bootloader, kernel, filesystems and multimedia through HW accelerators using `i.MX` processors.

RESEARCH EXPERIENCE

◇ **Tecnológico de Monterrey campus Monterrey**

· **Web programmer** (Part time, August 2009 – January 2011).
Design and implementation of an Second factor authentication system using browser User Agent. A functional prototype built and delivered to customer.

· **Web programmer** (Full time, August 2007 – July 2008).
Design and implementation of a classification method for detecting intruders using keystrokes typing rhythm. The designed algorithm documented and delivered successfully to customer (Google).

◇ **Instituto Nacional de Astrofísica, Óptica y Electrónica**

· **Master thesis in Computer Astrophysics** (January 2001 – December 2004).
Comparison between Decay Times of Satellite Galaxies using N-body numerical simulations and a two-body motion equation with dynamical friction. Several galaxy density profiles were compared. Thesis partially done in Marseille, France
Advisors: Ivanio Puerari (INAOE, México) and Lia Athanassoula (Observatoire de Marseille, France).

· **Scientific Programmer** (August – December 2000). Comparison between two classification methods (k-nn and neural networks) using stellar spectra.
Advisor: Olac Fuentes (INAOE, México).

TALKS

◇ Simulation of Decay Times of Satellite Galaxies using Semi-Analytical methods.
Proceedings of The National Convention of Astronomy 2003.
Instituto de Astronomía, UNAM.
Authors: Leonardo Sandoval, Lia Athanassoula and Jorge Villa

SKILLS

◇ Programming languages: Python, shell (bash), C, X86 assembler

◇ Version controllers: Git

◇ Linux Building Systems: LTIB, Yocto Project

LANGUAGES

◇ Native Spanish

◇ Fluent spoken/written English

◇ Fair **German**. ZDaF (Zertifikat Deutsch als Fremdsprache) obtained in Goethe-Institut, Guadalajara, Jalisco, Mexico (1996-1998)

HOBBIES

◇ Mountain climbing, travelling

- ◇ Tech book reading: x86 architecture, compilers, vectorization, binary analytics
- ◇ Meditation: Mindfulness, Yoga, Kriya Yoga

REFERENCE Available on request.