

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 the integration architect and has lead [DARS](#) (Data Analytic Reference Stack) and [MERS](#) (Media Analytic Reference Stack).
- **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 openembedded 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

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

REFERENCE Available on request.