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**
  - **Software Engineer** (October 2018 – present)
    Member of the **Software Stacks** team, providing specialized and optimized Clear Linux reference Docker Images. Leo is currently the Architect of the Data Analytic Reference Stack.
  - **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

◇ Playing Organ

◇ Tech and Spiritual book reading

REFERENCE

Available on request.