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

- **Linaro Limited**
  May 20 – Present
  - **Software Engineer**
    Member of The Developer Services Team. Leo is dedicated to support the Trusted Firmware CI project. Lead the CI (Continuous Integration) migration of the Trusted Firmware A project where now the open source community relies on the Open CI. Currently leading the CI migration (internal to open) of the MbedTLS. Submitted patches can be found at gerrit's project page.
- **Intel Corporation**
  Feb 15 – May 20
  - **Cloud Software Engineer** (Oct 18 – May 20)
    Member of the Software Stacks team, providing specialized and optimized Clear Linux OS Reference Stacks. Leo is one of the Integration Architects who has lead two stacks: the Data Analytic and Media Rererence Stacks, from design to release.
  - **Performance Software Engineer** (Dec 2017 – Oct 2018)
    Member of the Clear Linux Performance Team. Activities include: Performance Package Monitoring and Routine Optimization. For the latter, Leo's contributions focused on GNU C library, adopting AVX2 technology for *strcmp* and *strcpy* string routines. See patchwork for completed work.
  - **Embedded Software Engineer** (February 2015 – December 2017)
    Member of the Core Yocto Project Team, providing support for several sub-projects: bitbake, OpenEmbedded-Core and Poky. Initial maintainer of Patchtest, a framework and test suite for Open-embedded-Core Patches.
- **Freescale Semiconductor**
  Jul 2012 – Feb 2015
  - **Embedded Software Engineer - Professional Services Consultant** (Apr 14 – Feb 15)
    Board Support Package (BSP) development and support for i.MX Multimedia Processors. Direct support to US customers for the entire Software Stack: from boot loader up to the user-space.

- **Embedded Software Engineer - Field Application Engineer** (Jul 12 – Apr 14)
  Customer support for customers located in the USA Central Region and México using i.MX Multimedia Processors, with main focus on issues raised from meta-fsl-arm BSP meta-layer. Key member of the Linux build system migration, supporting community users to transition from *ltib* to the Yocto Project.

◇ **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.