

# José Hiram Soltren

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## SYNOPSIS

System Software Engineer and MIT alum. **Ten years experience** in various areas: Linux, kernel development, device drivers, computer graphics, firmware, video decoding, end user software, and systems administration. Additional specialties: automotive, aviation, machining, CAD, CAM, cycling.

## EDUCATION

### Massachusetts Institute of Technology, Cambridge, MA

*Master of Engineering*, Electrical Engineering and Computer Science Aug 2009

- Course work in operating systems, biomedical informatics, network protocols, scientific computation, signal processing, power electronics.
- Wrote thesis on using Semantic Web technologies to determine privacy policy compliance of database queries using a rules-based reasoner.

*Bachelor of Science*, Electrical Engineering and Computer Science Jun 2007

- Minor in Science, Technology, and Society.

## EXPERIENCE

### Senior System Software Engineer

NVIDIA Corporation, Santa Clara, CA and Austin, TX May 2011 - present

- Member of elite team responsible for the proprietary NVIDIA graphics driver stack for Linux, FreeBSD, and Solaris.
- Technical lead - Video Decode and Post-Processing API for UNIX (VDPAU).
- Ported VDPAU to a brand new video decoder architecture.
- Added support for next generation H.265/HEVC hardware video decode to the Linux driver and to VDPAU. <https://github.com/NVIDIA/vdpau-hevc-example>
- Participate in hardware architectural reviews for video decoding hardware.
- Responsible for video post processing shaders in Cg and GLSL languages.
- Expertise in OpenGL multithreading, graphics pipeline configuration, rendering.
- Key member of new hardware bringup process:
  - Communication with hardware, software, and chip delivery teams;
  - Prepared test plans and programs to execute on pre-silicon software and hardware emulation environments;
  - Execution of test programs on early silicon in first days of bringup
- Debug and fix critical stop-ship issues related to video decoding on GPUs.
- *Technologies used:* C, C++, Python, Makefile; gcc, gdb, Linux kernel, NVIDIA GPUs, OpenGL, firmware/microcodes.

### Member of Technical Staff

Model N, Redwood Shores, CA Aug 2009 - Nov 2010

- Member of middleware team, writing pricing, contracts, customer, compliance, and commitments support software for pharmaceutical and semiconductor industries.
- Technical ownership of key contract pricing feature in product.
- Worked with customers and management to define and prioritize features.
- Implemented customer facing features in both back-end application server (Java) and front-end user interface (JavaScript).
- *Technologies used:* Java, JavaScript, Oracle SQL; Apache Tomcat, Oracle WebLogic, IBM WebSphere, Oracle SQL Server.

EXPERIENCE

**Systems Administrator**

D. E. Shaw & Co., L.P., New York, NY Jun 2007 - Jun 2008

- D. E. Shaw & Co. is a global investment management firm located in NYC.
- Member of Systems team, responsible for all desktop, server, networking, and communications hardware and software infrastructure.
- Provided direct end user support through Systems Helpdesk rotations.
- Served as liaison between front office and Systems engineering specialists.
- Drove user requests and tickets to completion.
- Designed, and managed building of, video conferencing rooms.

COMMUNITY

**Weekend Residential Faculty**

Eastside College Preparatory School, East Palo Alto, CA Aug 2012 - Jul 2013

- Operated weekend dormitory program for high school students.

**Big Brother**

Big Brothers and Big Sisters of the Bay Area, Milpitas, CA Jan 2011 - Dec 2012

- Served as friend and mentor to a young man through his formative years.

**Trip Leader**

Bike & Build, Inc., Brooklyn, NY and Philadelphia, PA Jan 2006 - Aug 2008

- Planned and led two cross-country charity bicycle tours for young adults.

LANGUAGES

Fluent in: English, Spanish, C.

Proficient in: OpenGL, Java, JavaScript, R, C++, Scheme, Perl, Python, PHP, MATLAB, Cg, GLSL, CUDA.

CITIZENSHIP

United States