Ricardo Sisnett Hernández.

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Education:

Instituto Tecnológico de Estudios Superiores de Monterrey, Campus Guadalajara.
Bachelor in Computer Science and Technologies with Specialization in **AI** and **Computer Graphics**(2005 -2009).
Cumulative GPA: 94/100

Work Experience:

July 2010 – Present – **Senior Member of Technical Staff at Oracle –** Working as a Software Developer for the **Virtual Operative System (VOS)** group developing portable libraries in C to provide other Oracle developers **platform independent, robust and high performance code** for task such as process management, I/O, memory and networking.

July 2009 – May 2010 – **HPC Cluster Administrator at Intel Guadalajara –** Worked as intern in charge of a 17 node High Performance Computing (HPC) Cluster. Beside traditional **System Administrator** task, also responsible for my own **research project in C++** on Parallel Genetic Algorithms using multi-process and multi-threaded libraries such as **MPI** and **OpenMP**, which led to a couple of publications and talks.

Ago – Dec 2008 – **Internship at IBM Guadalajara –** Worked as an intern within Guadalajara site to add new functionality to the **Summer Speed Team project** to support IBM System Z. In charge of test automation and problem reporting functionality.

May – Ago 2008 - **Speed Team Internship at IBM Rochester, MN** – Developed a project that reported i5/OS problems and downloaded patches to fix them. **Worked as Java Programmer for the OSGi compliant plugin**. In charge of Problem Reporting functionality. Team of 4.

Teaching Experience:

September 2010 – July 2011 – **Lecturer at Universidad de las Artes Digitales –** Teaching the classes "**Artificial Intelligence for Games"** and **"Introduction to Operative Systems"** to Game Development Engineering Majors.

Major School Projects:

Fall 2009 – **Video Game Engine in DirectX –** As part of the final project for Video Game Development, the group assembled an engine from scratch using **DirectX9**. The engine had **AI, Networking, Physics, Graphics, Shading and Scripting** capabilities all build in **C++**. Worked as **AI Developer** in charge of **Waypoint Navigation, Path Finding, Steering Behaviors, Influence Maps, and Finite State Machines** as well as overall **AI architecture** among others.

Fall 2009 – **Unreal Learning Environment (UnrealLE) –** Machine Learning Final Project, added a **Neural Network** to **Unreal Tournament III** as a Mod to the AI. The NN learned State transitions from observation of the hand-coded bots.
Code and Summary at http://www.tesisinteractive.com/projects.html

Spring & Fall 2009 – **Computer Graphics Research** - Worked with PhD Gildardo Sanchez developing a **Maya Plug-in** implementing the **SBL** (Single Query Bidirectional Lazy Coltion Detection) **PRM** (Probabilistic Roadmap) **Algorithm** and the advantages of **Motion planning algorithms** on character animation. Work published in a book chapter and in a poster in a national conference.
Summary and snaps available at http://www.tesisinteractive.com/projects.html.

Personal Projects:

2008 – **Alien Burner Chess - AIR Chess Board Game**. Implemented it just for fun and learning of mini-max search algorithms and the new Adobe CS3 & Air Platform, as well as ActionScript 3.0. Demo available at: http://www.tesisnteractive.com/projects.html

Technical Skills.

Advanced [> 5 Years]: Java, ActionScript 3.0, Ruby, Python, C/C++
Intermediate[2 – 5 Years]: C#, ActionScript 2.0, PHP, UnrealScript
Basic [< 2 Year]: Lisp, SQL, Smalltalk, Objective-C, Scala, Perl, Bash
Platforms: MacOS X (Admin), Windows XP(Admin), Linux(user), AS/400(user)
Frameworks: Ruby on Rails, Django, OSGi, OpenGL, MPI, OpenMP, Maya API, DirectX 9/10/11, Unreal Engine 3 Modding, Win32, POSIX.
Methodologies: RUP/AUP, Agile, Waterfall.

Awards and Leadership.

Outstanding results National Evaluation Exam for Undergraduates (Ceneval)
3rd Place ACM Mexican Pacific Pre-Regional Contest Fall 2009
9th Place ACM Regional Contest Fall 2008
Two stars in the Microsoft 5 Star Developer Initiative
Basic Course in Intellectual Propriety by World Intellectual Propriety Organization (WIPO)
Student Volunteer Scholarship Granted at OOPSLA 2007, 2008 & 2009
7th Place Local Association of Computer Machinery (ACM) Programming Contest Fall 2007.
2nd Round Contestant in Project Hoshimi at Imagine Cup 2006.
9th Place ACM Regional Contest Fall 2006
ITESM University Musicians Representative Team Member. (Violinist and Drummer)
7th Place Local ACM Programming Contest Fall 2006 (ITESO University –CIPI)
1st Prize Local ACM Programming Contest Spring 2006 (ITESM University site)

Attendee.

CIISA (International Software Engineer Congress) [2009, 2008, 2007, 2006]
OOPSLA (Object oriented programs, systems, languages and applications)[2008, 2007] {Student Volunteer}
WAFR (Workshop on Algorithmic Foundation of Robotics) [2008] {Staff}

Publications

"Parallel Genetic Algorithms in a Cluster Architecture: A Case Study", Paper, International Super Computing Conference in Mexico 2011, Sisnett.

"Intelligent Motion Planning for Virtual Characters", Poster. Serious Games Winter School. Sisnett, Sanchez.

"Multi-robot path finding in dynamic environments." Chapter in Mobile Robots Navigation. InTech. Astengo, Sanchez, Calzada, Sisnett.

Conferences and Talks

"Parallel Genetic Algorithms to Optimize Double MEWMA Charts", International Super Computing Conference in Mexico 2010, Sisnett,de Luna.

"Parallel Genetic Algorithms: A Case Study" at the Intel HPC Week. ITESM Campus Guadalajara 2010.

"High Performance Computing Applications: Intel GDC Cluster" at the International Conference on Engineering. UVM 2009

Languages.

Spanish (Mother Tongue)
English (653 TOEFL)
German (First Stüfen level)