

Gabriel J. Pérez Irizarry — Computer Science Graduate Student

CONTACT INFORMATION

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OBJECTIVE

To expand my software development skills and experience in an innovative and exciting company or start-up through an internship or co-op program.

EDUCATION

Georgia Institute of Technology
Major: M.S. Computer Science **Specialization:** Social Computing **August 2012 - Present**
Expected Graduation Date: May, 2014

University of Puerto Rico — Mayagüez
Major: Computer Engineering **Graduation Date:** May, 2012 **2006-2012**
GPA: 3.32/4.00

SKILLS

Systems Development
Talent for working with large existing code bases and development of complex software systems.

Web Development
Ability to create, manage and enhance interactive and secure web applications.

Project Direction
Proven ability to lead and manage a wide variety of design and development projects.

TECHNICAL

Java
Python
C and C++
Bash
PHP

AVR Assembly
x86 Assembly
Emacs
Eclipse
Git/Hg/Svn

GNU/Linux
Mac OS X
Windows XP/Vista/7
Android

WORK EXPERIENCE

Track All Inc, Caguas PR — *Mobile Software Developer and Systems Administrator* Summer 2011

Developed an Android application capable of reporting potholes on the road, acts of vandalism (e.g. graffiti), illegal trash dumping and other problems that affect cities worldwide. People are able to install this application, take a picture of the item, add notes and other information. Then they can upload the data and view a map with all the items.

Google Summer of Code - Sunlight Foundation — *GSoC Student* Summer 2010

Worked with the Sunlight Foundation on the 50 States Project as a GSoC student. Google Summer of Code is a program in which Google sponsors students to work full-time on Free and Open Source projects during the summer. The 50 States Project wants to make data available from all of the U.S. states legislatures through a single easy to use API. I worked on the development of several scrapers for some states including Hawaii, Colorado and Oregon.

IBM Linux Technology Center, Austin TX — *Pre-Professional Programmer* Summer 2009

Worked on enhancing and solving issues related to the installer of a Linux distribution developed by IBM. Some of the enhancements include the ability to create live USBs, CDs and virtual machine images. Worked with low-level Linux components such as the initrd/initramfs.

RESEARCH

University of Puerto Rico, NSF, CenSSIS — *Library Developer* 2011

The University of Puerto Rico Mayaguez (UPRM) is developing a high performance, documented, and cross-platform GPU library for hyper-spectral image processing. This library takes advantage of GPUs and the CUDA framework by NVIDIA to drastically improve execution times of some hyper-spectral image processing algorithms. A key challenge in the development of the library is portability. I worked on the development of the build infrastructure and testing infrastructure. Additionally, I was involved on the creation of its coding guidelines. Conference Paper: Gabriel J. Prez-Irizarry, Francisco De-La-Cruz, Miguel Velez-Reyes, Nayda Santiago-Santiago, "Developing a portable GPU library for hyperspectral image processing", appeared SPIE Defense, Security and Sensing conference, Baltimore, March 2012.

	University of Puerto Rico, NSF and PR-LSAMP — <i>Game Developer</i> 2010 Worked on the development of a serious 3D game-based learning platform in Java using JMonkeyEngine. The project aims to develop a factory simulation game that will help teach Industrial Engineering concepts. My main responsibilities where the integration of the TWL toolkit library, the implementation of the game grid, the refactoring of some third-party dependency and the design of some components.
	University of Puerto Rico, Lockheed Martin, IAP and PR-LSAMP — <i>Library Developer</i> 2009 Worked on the development of a serious 3D game-based learning platform in Java using JMonkeyEngine. The project aims to develop a factory simulation game that will help teach Industrial Engineering concepts. My main responsibilities where the integration of the TWL toolkit library, the implementation of the game grid, the refactoring of some third-party dependency and the design of some components.
	University of Puerto Rico — <i>Developer</i> Spring 2008 Under the supervision of Prof. Marko Schtz, I contributed to start implementing a software metrics system for NetBSD. This system combines several existing FOSS software metrics systems. My work consisted of the integration of software metrics tools such as cxref and ncc into the NetBSD build process. This work was done as part of the undergraduate research class of the CS department.
AWARDS	Reto 2.0 2011 Award Winner — <i>Web Developer</i> 2011 Reto 2.0 is a competition that is open to all college students and it is sponsored by IBM, HP and Microsoft. The idea is to motivate college students to build rich web 2.0 applications. My team built http://enterar.me which roughly translates to: learn. The goal of the site is to combine the strengths of social media and traditional media into a single view. The web site does this by pulling data from Twitter, Facebook and the El Nuevo Da's API.
STUDENT ORGANIZATIONS	Free Culture @ UPRM — <i>Founder and President</i> 2007-Present Students for Free Culture (SFC) is a diverse, non-partisan group of students and young people who are working to get their peers involved in the free culture movement. SFC chapters exist at over 40 colleges and universities around the world. SFC has collaborated with Creative Commons, the Electronic Frontier Foundation, Public Knowledge, Downhill Battle, and other free software and media reform groups. I co-founded our local chapter and I have help lead dozens of initiatives at our University including: Ubuntu Install Fests, Open Source Game Nights, Free CD Giveaways and a Petition for Free/Open Books. One of our most recent projects, colegiodemocrati.co , was featured in one of Puerto Rico's most popular newspapers, Primera Hora.
	GPM — <i>Founder and Secretary</i> Fall 2006-Spring 2007 Co-founded the Multimedia Productions Group. Served as Secretary and worked on the creation of 3D cutscenes for the Ruminix video game project. Also, I prepared various tutorials on how to use Blender for 3D modelling and animation.
SCHOOL PROJECTS	Capstone — <i>Student</i> Fall 2011 The Boardcaster is an electronic chess board with an integrated chess engine. The board records chess games and broadcasts them live on the Internet through WiFi. Our system also has the unique feature of illuminating valid moves for player when a piece is raised with lights located throughout each square on the board. I worked on building the LED display system, including hardware and software, and on the WiFi communication. Also I contributed with the PCB verification and development.
	Microprocessor Interfacing — <i>Student</i> Fall 2010 Our goal was to use the Arducopter platform, a quadcopter based on Arduino, to create an automatic power-line surveying tool. My main contribution to the project was to get over-the-air serial communication working correctly and reliably between the Arducopter and the ArduRC controller. Additionally, I was involved in the air-worthiness tests performed on the aircraft and developed a GUI application to process the data acquired during missions for use with Google Earth.
MORE	Detailed descriptions, pictures and videos of my work: http://gabrieljperez.nfshost.com/