

## Profile

Goal oriented developer with a background in hardware and electrical engineering and more than 10 years of experience in the technology field. My passion is to use technology to empower people and solve problems in an efficient and innovative way. I'm very serious about using the right tools for the job and I'm always looking for opportunities to learn new software and hardware skills. I believe that strong communication and attention to detail can create high quality technology solutions that improve people's lives.

## Skills

### SOFTWARE

- Ruby/Ruby on Rails, Python, Objective C, Swift
- Front-end and Back-end Javascript (jQuery, EmberJS, React, Node)
- Relational and Non Relational Databases (PostgreSQL, MongoDB)
- HTML / Template languages (ERB, HAML, Handlebars)
- CSS and CSS preprocessors (SASS, SCSS)

### HARDWARE

- Multilayer PCB Design and Testing. PCB CAD software
- Microcontrollers
- Embedded Systems
- Wireless Sensor Networks

### LANGUAGES

Fluent in English & Spanish

- Front-end CSS Frameworks (Bootstrap, Foundation, Bourbon/Neat)
- Data analysis tools (Matlab, R, Python's libraries)
- TDD with Rspec and MiniTest
- Team collaboration with Git/Github
- Continuous integration and deployment (Travis CI, Heroku, Amazon Web Services, IBM Bluemix)
- REST API design. Consumption of external APIs
- Communication & Antennas circuit design and testing
- Wired and Wireless Communication protocols
- Measuring Instrumental operation (Multimeter, Oscilloscope, Spectrum Analyzer, Parameter analyzer).

## Experience

### LEAD DEVELOPER, VIJILENT; RALEIGH, NC — 2015 - PRESENT

Vijilent estimates the level of trustworthiness of strangers in the sharing economy market utilizing predictive analytics.

- Deployed the Back-end Node.js application to AWS and Bluemix.
- Developed an iPhone app submitted to Appstore from a barebones iOS application in Objective C.
- Developed a React.js front end app to provide a demo page for Vijilent API, with documentation. The app communicates via AJAX to the JSON Back-end API.
- Created a innovative way of scraping social network information to process with Vijilent algorithms.
- Participated in the development of the Node.js / Express / MongoDB backend.
- Currently developing the marketing webpage for Vijilent with a Ruby static page generator (Middleman).

### CO-FOUNDER / R&D DESIGNER / PROJECT MANAGER, ACUMINE; BAHIA BLANCA, ARGENTINA — 2008 - 2014

Acumine Argentina S.A. is the first academic electronics spin-off in Argentina. The company develops one of the world's leading Collision Avoidance Safety Systems for open pit mining. The company works together with the Australian Centre for Field Robotics in the University of Sydney, Australia.

- Designed the 4 layer PCB boards for the main signal processor, displays and small nodes forming system. The system includes 8 micro controllers, an FPGA to communicate all the internal subsystems, 3 radio frequency systems, a GPS and several military connectors with ports to external sensors and supporting different communication protocols.
- Designed and implemented an automatized hardware and software test system to check an entire product board and generate a report to be sent to the customer verifying that all systems work properly in every box.
- Participated in the design of the software and firmware of all systems, subsystems, mapping and data analysis tools of the collision avoidance product.

- Trained personnel in mines of three different countries and 5 different sites in the installation, operation of the system and understanding of the reporting features.
- Generated a customized data analysis tool for a mayor mining safety test carried out by Barrick Gold. Barrick Gold engineers decided that Acumine system was the best solution for the entire corporation.
- Worked as a project manager and Hardware R&D lead with a team of 20+ people in Argentina and Australia, in two opposite time zones to develop the Acumine collision avoidance product.
- Participated as the Hardware R&D lead in an Acumine dispatch system utilized by firefighter forces in small cities in Argentina. The product is used to summon firemen on duty using algorithms that allow quick response and instant replacement for unavailable firemen using mobile phone technology.

### **ELECTRONICS TEACHER, UNIVERSIDAD NACIONAL DEL SUR; ARGENTINA — 2005-2012**

Teacher of third and fourth year students of Electronics Engineering. Subjects included analog and digital electronics design, communications and antennas, amplifiers and feedback.

## **Education**

### **THE IRON YARD ACADEMY (RAILS ENGINEERING / 2014)**

- 12-week intensive, full-time, Back-end Engineering course focused on training in Ruby on Rails, object oriented programming, techniques, and best practices.
- Completed more than 10 projects in 12 weeks in Ruby and Ruby on Rails working in both Back-end and Front-end aspects of the problems to create functional apps with intuitive user experiences. Used AJAX to update pages without reloading and responsive design. Deployed apps in Heroku. Used continuous integration tools. Used Agile Development, Trello and Git to collaborate, refine the products, and solve problems.
- Completed a final project in a team of 7 people for an event management system, currently tailored to GrassRoots Music Festivals. Developed with Ruby on Rails, Ember.js and deployed to Heroku is currently used yearly in 3 festivals.

### **BACHELOR OF ELECTRONICS ENGINEERING (UNIVERSIDAD NACIONAL DEL SUR, ARGENTINA / 1998 - 2006)**

- Bachelor specialized in design, analysis and testing of electronics, embedded systems, analog and digital applications, programming, communications, sensor networks and antennas.
- Completed a 1 year final project designing and building a close proximity system for vehicle collision avoidance. The project was later integrated in the main product of Acumine, a startup that I co-founded.

### **POSTGRADUATE COURSES**

- Functional Analysis, Analog VLSI Design, Modeling and operation MOS transistor, Multisensor datafusion.

## **Open source contributions**

- Exercism: fixed an installation issue of the local app related with the gem versions.
- Thoughtbot's Suspenders: added the ability to make all the apps "deployable by default" to Heroku by splitting the app creation process in two.

## **Volunteer work**

- Teacher for the RailsBridge workshops in Durham and New York City (2015 - 2016).
- Setup of computer and installation of Linux Operating Systems in Kramden Institute, Durham (2014).