Dublin, Ireland
EU Citizien (No Visa required)
Spanish (Native), English (B2)

DANIEL SAIZ

+353 (0) 234 4485
dsaiztc@gmail.com
http://www.dsaiztc.com

EMPLOYMENT

Software Engineer, Intern **Universidad Carlos III de Madrid (Spain)** **Dec 2013 – Jun 2014**

Biker Manager **Android** application (http://goo.gl/bUiIUy) developed in **Java**

- R&D Project between UC3M and Bultaco Motors (electric motorcicles manufacturer).
- Developed as part of my Final Year Project (Passed with Honours).
- Integration with **OsmAnd** open source project (navigation and maps) adding other functionalities:
  - **Bluetooth** communication with the motorbike (real-time telemtry tranmission), including implementation of Android Bluetooth Library, petitions management, processing received information (**JSON** format) and storagement.
  - **RDBMS** design and development for received telemetry data (associated to a specific route and rider), with **SQL** queries on **SQLite** database.
  - **UI** modifications to show telemetry and user data (and also for accessing other utilities system-related) through Android interface definition in **XML** schema.
  - Implementation of a **Machine Learning** system that learn from route-associate telemetry data and, once trained, give consumption estimations for new routes. Full development of an **Arficial Neural Network** in Java for working inside the Android device.
  - Information retrieving from **Web Services** based on **SOAP** (IIS server) with **ksoap2** library and **wsdl2code** to get the Java classes from **WSDL** file (the .net web service was my fellow intern main task, not mine).
- The **Design Pattern** used was **MVC**. Also, I tried to develop outside OsmAnd app everytime it was possible (and by this way, we wish to make future OsmAnd core upgrades painless).
- The code development workflow involved **git** revision control with **Bitbucket** (own code) and **GitHub** (OsmAnd code), **Kanban** methodology (though I developed mostly on my own, it helped me to schedule tasks with other fellows and the project manager).
- I also had to test-and-analyse the Machine Learning system with different configurations.

EDUCATION

Telecom. Engineering **Universidad Carlos III de Madrid (Spain)** **Sep 2008 – Sep 2014**

- Honours Bachelor Degree (NFQ Level 8) in **Telecommunications Engineering**, major in Telecommunications' Systems and Networks. 5 years study plan (equivalent to new *Bologna* Degree + Master).
- Final Year Project passed with Honours: *Range Estimation System for Electric Vehicles with Artificial Neural Networks*, available here (in spanish): http://www.dsaiztc.com/FinalYearProject.pdf
- Main Coursework: Computer Science; Digital Signal Processing; Electronics; Communication Systems; Networking.

TECHNICAL EXPERIENCE

Projects

- **Android App** (2014). Application for making Secret Santa draws. > 1700 downloads. Code development in **Java**, DB management with **SQL** and UI definition with **XML**. http://www.dsaiztc.com/secretsanta.
- **Simple MLP** (2013). Starting learning about ANN I developed a *Multi-layer Perceptron* in **Java**. You can check out the code here: https://github.com/dsaiztc/MultilayerPerceptron.
- **POV Clock** (2011). *Persistent-Of-Vision* clock with **C** programming of a PIC18F2525 by Microchip (MPLAB IDE). Take a look at https://youtu.be/6HBF5k-xedc.

Languages and Technologies

- Java; SQL; MATLAB; JSON; XML; C (Prior Experience); VHDL (Prior Experience); HTML & JavaScript (Some Exposure, want to learn more); Python (No Experience but definetly the next language I will learn about)
- Eclipse; Android; SQLite; Maven; Web Services (SOAP, REST); Google App Engine (Learning About)