# Marc Espín Pedrol

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## Personal Data:

**Birth Date:** 27 of February of 1988          **Place of Birth:** Barcelona, Catalonia, Spain
**DNI:** 47885560 C
**Direction:** Barcelona, Spain
**Telephones:** (+34)615147128
**E-mail:** epsilonmajorquezero@gmail.com

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## ACADEMICAL EDUCATION:

- **Math's Degree** at **Facultat de Matemàtiques i Estadística** from **Universitat Politècnica de Catalunya**.
- **PUMPS** (Programming and Tuning Massively Parallel Systems) summer school, July 7-11 2014 at **BSC** *(Barcelona Supercomputing Center)* collaborating with **NVIDIA**.
- Assistance at **Amazon Web Service Summit Barcelona 2013**.
- Online course on **Mobile Robot Control** passed with distinction (January 2013) by **Georgia Institute of Technology**.
- Online course on **Computational Photography** passed with distinction (March 2013) by **Georgia Institute of Technology**.
- Online course on **Social Network Analysis**  (October 2013) by **University of Michigan**.

## IT KNOWLEDGES:

- **Programming in: C++, Python, PHP, Java**, R, Html, CUDA, XML, Git, WebGL, Sage, Basic.
- **Abstract and numerical calculus programs: Matlab, Maple**, Geogebra.
- **Graph calculation and visualization programs:** Gephi, NetLogo
- **Additional text processor editors: LaTeX**.
- **Image edition programs:** Adobe Photoshop 6.4.
- Both **Windows** and **Linux** user.
- **Git** user.


## LANGUAGES:

- **English:** Proficiency. Certificate of level C2 (*Certificate of Proficiency in English by Cambridge, 2009*)
- **French:** Intermediate. *Studied for 2 years. 5 months in Switzerland.*
- **Spanish** and **Catalan** as native.
- **German**: Basic notions.

**PROFESSIONAL EXPERIENCE:**
**June 2016 to April 2018:**

Loopon AB: *Full Stack Developer* for the startup *WebApp* used for improving the communication between Hotels and their Guests. I was mostly in charge of the *design and implementation of new features,* integrating new data sources to the database, and *fixing bugs*. *Frontend* was mostly developed in **Java** converted to JavaScript through GWT while *Backend* was developed in *PHP* and *PostgreSQL* for the *database*. Special care was always given to *Code Quality, Readability and Documentation* and also to the *UX.*

**January 2015 to May 2015:**

AleaSoft: *Junior Consultant Analyst* in charge of the forecasts and client and intern *reports for Germany, France, Switzerland and Poland*. I was in charge of the forecast of the Energy Market Price for those markets 10 days and 3 years ahead of time with hourly precision of about a 5%. Also in charge of the Intranet and checking and solving errors from the rest of applications from the company. Programing in *C++, Basic, JavaScript, HTML, XML, Python* and using *Time Series Analysis and Machine Learning* to make the forecasts with hourly data (Demand, Price, Renewable Generation, etc.) from the last 20 years using *Neural Networks* and *SARIMA models*.

**February 2014 to June 2014:**

Rollomatic SA: *Internship in Switzerland* for developing my Bachelor Thesis on *"Function Representation for Swept Volume Solid Modeling"* at the *R&D department* (Graded with 9.5). Rollomatic builds grinding machines and my task there was to *develop the mathematical abstract representation of the volumes* with micrometer precision, as Rollomatic built objects ranging from 4 micrometers in diameter to a few centimeters, and the *build of a C++ multithreaded algorithm for representing and plotting swept volumes in 3D with sharp features*. This was attained using Functional Representation of the desired volumes and implementing modified Marching Cubes and many other algorithms to get a proper representations of the solids, getting special attention on the quality of the edges.

**May 2013 to January 2014:**

LaMagnética: *Programmer and Data Analyst in a Marketing and SEO consultant's office*. Working with *Big Data, Python programming, Social Networks API's* (Twitter, Facebook, Klout) and report writing. I was mainly on my own developing tools for *Automatic Data Mining* over *Twitter, Facebook and Klout* and the polishing and interpretation of the gathered *data usually millions of Tweets* accounting for *several Terabytes*.

**March 2012 to April 2013:**

UPC Alumni: IT support. Web Administration, fellows Database Administration, countability and customers service. Scripting activities with C++ and Python.

**OTHER DATA:**

- Ocasional Arduino tinkering.
- > 10 years of music education in Music Theory, Classical Guitar and Choir.
- Car and motorbike driving license. Own vehicle.
- Language exchanges with people from Ireland, Belgium and Spain