

Alfredo Hernández 29th June, 1994

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EXPERIENCE

Universitat Autònoma de Barcelona

uab.cat

Lead Statistical Programmer & Project Manager

July 2018 – Present

In the frame of RENEB, we are developing Biodose Tools, an Open Source R Shiny application to help professionals and researchers on Biological Dosimetry to perform several computations and statistical analyses. We also aim to clarify and document the tests used and to propose those considered most appropriate.

Our end-goal is to replace the current software used by different laboratories and to standardise the used statistical methods. This will have a major impact in Interlaboratory Comparison tests for Quality Assurance.

Centre de Recerca Matemàtica

crm.cat

Complex Systems Intern

September 2017 – July 2018

My master's thesis (with Álvaro Corral and Isabel Serra as my thesis supervisors) consists of developing statistical methods using bootstrap, permutation tests, and clustering to study the influence of sea surface temperature on tropical-cyclone intensity.

Additionally, I have created a unified hurricane occurrences dataset with finer temporal temperature tracking than those currently available.

Complex Systems Intern

February – July 2017

My bachelor's thesis (with Álvaro Corral as my thesis supervisor) consists of the study of real hurricanes occurrences using some simple statistical models. The main skills I developed are:

- Data extraction.
- Programming.
- Statistical analysis.

Computational Neuroscience Intern

February – July 2017

Under the supervision of Alexander Roxin, I studied the macroscopic and microscopic description for networks of spiking neurons. The main skills I developed are:

- Mathematical analysis.
 - Numerical simulations.
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EDUCATION

Universitat Autònoma de Barcelona

CERDANYOLA DEL VALLÈS, SPAIN

MSc in Modelling for Science and Engineering

2017 – 2018

Thesis: *The Influence of Sea Surface Temperature on Tropical-Cyclone Intensity.*

Bachelor's degree in Physics

2012 – 2017

Thesis: *On Tropical-Cyclones: An Statistical Analysis on a Warming Environment.*

Institut de Vic

VIC, SPAIN

Baccalaureate diploma in Mixed Sciences

2010 – 2012

COMPUTER SKILLS

Advanced: GNU/Linux, R, Python, Shiny, L^AT_EX, Git, Inkscape.

Intermediate: TensorFlow, Mathematica, Bash, SQL, awk, Jekyll, HTML, CSS, macOS, GIMP.

Basic: Spark, Hadoop, C++, C, MATLAB, Computational Genomics.

CONFERENCE PRESENTATIONS

XXIXth International Biometric Conference

BARCELONA, SPAIN

Poster Presentation

8–13th July 2018

Poster: *The Environmental Influence on Tropical-Cyclones.*

VII Jornada complexitat.cat

BARCELONA, SPAIN

Poster Presentation

29th May 2018

Poster: *The Influence of Sea Surface Temperature on Tropical-Cyclone Intensity.*

CERTIFICATES

Coursera

Intro to TensorFlow

March 2019

Launching into Machine Learning

March 2019

How Google does Machine Learning

March 2019

Structuring Machine Learning Projects

October 2018

Improving Deep Neural Networks

September 2018

Introduction to Probability and Data

September 2018

Neural Networks and Deep Learning

August 2018

Ubuntu

Ubuntu Membership

5th May 2016

Official Ubuntu Membership means recognition of significant and sustained contribution to Ubuntu or the Ubuntu community. In particular, of my continuous collaboration in Ubuntu GNOME.

The Linux Foundation

LFC291-Compliance Basics for Developers

5th April 2016

Because open source is now found everywhere software exists, a good working knowledge of open source licensing and compliance is critical.

OTHER INFORMATION

Natural languages: Spanish (*mother tongue*), Catalan (*mother tongue*), and English (*professional working proficiency*).

Interests: linguistics, art history, cinematography, literature, mathematics, music, open source, woodworking, cooking, typography, and UI/UX-design.