

Alfredo Hernández 29th June, 1994

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EXPERIENCE

Supersolid Ltd. supersolid.com
October 2019 – Present
Machine Learning Engineer

My main responsibilities at Supersolid include:

- Use machine learning techniques to support the User Acquisition team in projecting campaign profitability allowing for earlier actions.
- Develop and maintain serverless APIs and tools to automate and simplify several processes.
- Build and maintain data pipelines to help develop our internal stack.
- Build and maintain internal R packages to promote reproducible analysis frameworks, reduce development time of APIs and tools, and enhance knowledge management.

Biodose Tools Team github.com/biodosetools-team
July 2019 – Present
Project Maintainer

I maintain and ensure the continued development of Biodose Tools as an Open Source project.

Universitat Autònoma de Barcelona uab.cat
July 2018 – July 2019
Lead Statistical Programmer & Project Manager

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
September 2017 – July 2018
Complex Systems Intern

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.

EDUCATION

Universitat Autònoma de Barcelona	CERDANYOLA DEL VALLÈS, SPAIN
MSc in Modelling for Science and Engineering	2017 – 2018
Thesis: <i>The Influence of Sea Surface Temperature on Tropical-Cyclone Intensity.</i>	
Bachelor's degree in Physics	2012 – 2017
Thesis: <i>On Tropical-Cyclones: An Statistical Analysis on a Warming Environment.</i>	
Institut de Vic	VIC, SPAIN
Baccalaureate diploma in Mixed Sciences	2010 – 2012

COMPUTER SKILLS

Advanced: GNU/Linux, R, Python, SQL, Shiny, Google Cloud Platform, L^AT_EX, Git, Inkscape.

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

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

PUBLICATIONS

- D. Endesfelder, U. Oestreicher, U. Kulka, E. A. Ainsbury, J. Moquet, S. Barnard, E. Gregoire, J. S. Martinez, F. Trompier, Y. Ristic, C. Woda, L. Waldner, C. Beinke, A. Vral, J. F. Barquinero, A. Hernández, S. Sommer, K. Lumniczky, R. Hargitai, . . . , A. Wojcik (2021). RENEB/EURADOS Field Exercise 2019: Robust Dose Estimation under outdoor Conditions based on the Dicentric Chromosome Assay. *International Journal of Radiation Biology*, 0(0), 1–48. <https://doi.org/10.1080/09553002.2021.1941380>
 - A. Hernández, D. Endesfelder, J. Einbeck, P. Puig, A. Benadjaoud, M. Higuera, E. Ainsbury, G. Gruel, U. Kulka, L. Barrios and J. F. Barquinero (*in preparation*; 2021). Biodose Tools: An R Shiny Application for Biological Dosimetry. URL: <https://biodosetools-team.github.io/biodosetools/>
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CONFERENCE PRESENTATIONS

European Radiation Protection Week 2019	STOCKHOLM, SWEDEN
Oral Presentation	15–17 th October 2019
Title: <i>Biodose Tools: An R Shiny Application for Biological Dosimetry.</i>	
XXIXth International Biometric Conference	BARCELONA, SPAIN
Poster Presentation	8–13 th July 2018
Poster: <i>The Environmental Influence on Tropical-Cyclones.</i>	
VII Jornada complexitat.cat	BARCELONA, SPAIN
Poster Presentation	29 th May 2018
Poster: <i>The Influence of Sea Surface Temperature on Tropical-Cyclone Intensity.</i>	

CERTIFICATES

Coursera

Production Machine Learning Systems	<i>January 2020</i>
End-to-End Machine Learning with TensorFlow on GCP	<i>January 2020</i>
ML with TensorFlow on Google Cloud Platform Specialization	<i>January 2020</i>
Structuring Machine Learning Projects	<i>October 2018</i>
Improving Deep Neural Networks	<i>September 2018</i>
Introduction to Probability and Data	<i>September 2018</i>
Neural Networks and Deep Learning	<i>August 2018</i>

Ubuntu

Ubuntu Membership	<i>5th May 2016</i>
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	<i>5th April 2016</i>
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.