



# FEDERICO MONREAL

Experienced in data science collecting, analyzing and interpreting datasets as well as implementing machine learning models like deep neural networks. Advanced knowledge of R and python, and experienced in computer vision such as image preprocessing and convolutional neural network models. Committed to use Machine Learning and AI in order to find complex datasets patterns. I enjoy working in a team and communicating data results.

## CONTACT

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## EDUCATION

### BSC in BIOPHYSICS.

(GPA: 8.3 out of 10)

Autonomous University of San Luis Potosi, Mexico. 2015 – 2019

### MSC in MATHEMATICAL AND COMPUTATIONAL MODELLING (funded by CONACYT).

(GPA: 9.3 out of 10)

Institute of physics, UASLP, Mexico. 2019-2021

## SKILLS

- Programming languages: Python (4 years ), fortran (4 years), R (1 year), javaScript (jquery) (1 year), SQL (1 year), html and CSS (Bootstrap).
- PHP Methods: phpMyAdmin and Postman
- Softwares: Latex, Matlab and Excel (Macros).
- Operating Systems: Linux and Windows.
- Management of scripts and analysis modules in python such as numpy, sklearn, pandas, Pytorch, Flask and scipy.
- Management of json and xml data format for api communicatin .
- Database systems: MySQL (XAMPP, and Workbench)

## PROFESSIONAL REFERENCES

- Dr. Guillermo Iván Guerrero García. Institute of physics, UASLP. [givan@uaslp.mx](mailto:givan@uaslp.mx)
- Dr. Enrique Gonzáles Tovar. Institute of physics, UASLP. [henry@mail.ifisica.uaslp.mx](mailto:henry@mail.ifisica.uaslp.mx)
- Distribuidora de Carne 44-44-81-29-44

## LANGUAGES

- English: Toefl ITP – 540

## EXPERIENCE IN DATA ANALYSIS (Institute of physics, UASLP, Mexico)

Experienced performing statistics analysis in python or R such as variance analysis and PCA. Also, implemented predictive models for classification and regression, specifically SVM, deep neural networks (fully connected and convolutional neural networks), multilinear regression and ARIMA.

Experienced in data preparation and data visulization employing modules in python like pandas, seaborn and matplotlib. Also, skilled implementing numerical methods like Newthton Raphson, Secant method and runge-kutta to solve equations numerically.

I have a solid background in this field taking the following courses:

- Biostatistics.
- Applied probability.
- Algorithms and programming.
- Advanced computational methods.
- Applied mathematics.

## EXPERIENCE IN DATABAES:

Experienced designing a customer management platform web and database system for a Distribuidora de Carne.

## TEACHING EXPERIENCE:

- Python Introduction- First spring school in computational simulations, Science Faculty, UASLP, Mexico. 2021

## WORKSHOPS and CONFERENCES

- Tenth Workshop of Molecular Dynamics, Applications to Biochemistry and Pharmacy, UNAM, Mexico. 2021
- Accreditation of Microsoft Office, SEP, México. 2013
- IEEE 18<sup>th</sup> International Conference on Automation Science and Engineering.