JOSÉ ALBERTO LÓPEZ LÓPEZ

BACHELORS IN PHYSICS

MASTERS IN ARTIFICIAL INTELLIGENCE

JLL.6@hotmail.com

ABOUT ME

I belive that physics and AI are two careers which complement each other very well and both are powerful tools for solving a great number of problems. I consider myself a dedicated, responsable, and very capable person, with the ability to quickly learn new things. I like to play sports and I have great passion for music.

EXPERIENCE

2018 **Algorithms and Prototipes Developer**
ARTIFICIAL INTELLIGENCE RESEARCH CENTER · University of Veracruz
C++ developer of various company projects, involving computer vision, autonomous movement detection in vehicles and embedded systems using accelerometers and Furier analisys.

2017 **Engineer Assistant**
MECHANICS AND REACTOR ENGINEERY DEPARTMENTS · Laguna Verde Nuclear Power Plant
Engineer assistant in the 18th fuel recharge of Laguna Verde Nuclear Power Plant. Assisting machanical engineers in maintainance of diverses reactor machines and systems, and doing administrative work of the department. As well as performing activities in reactor engineery department like reactor monitoring, data analysis of reactor jet pumps stability among others.

EDUCATION

2020 **Masters in artificial intelligence**
ARTIFICIAL INTELLIGENCE RESEARCH CENTER · University of Veracruz, Mexico

2018 **Bachelors in physics**
FACULTY OF PHYSICS · University of Veracruz, Mexico
Best marks of generation.

PROFILE

My background in nature and computer sciences areas has allowed me to develop good skills to solve problems of many kinds, especially those that involve programing and mathematics. I have an outstanding analytical skill and I always focus on offering solutions in the most efficient way possible, but also looking for the simplest, tasteful and time-proof results.

PROGRAMMING LANGUAGES & TECHNOLOGIES

	Junior — Senior
C++	
Python	numpy, pandas, statsmodels, keras, sklearn, tkinter, etc.
Mathematica	
SQL, MySQL	
Git	
Java	
Fortran	
Javascript	
HTML, CSS	
LaTeX	
Others	

PROJECTS

Robot Hostess
I programmed the entire code of a Robot hostess in C++ with ROS. The robot detects diners via face recognition and lead them to a suitable table.

Augmented reality
Example of augmented reality made with Python and OpenCV.

Traveling salesman problem visualization
Visualization of traveling salesman problem solved with simulated annealing.

Grasp Objects in Clutter (Masters Thesis)
I developed an algorithm for accommodate objects in order to facilitating later grasps by defining grasping and neighborhood rules, and appling AI nature inspired algorithms.

Automatic Car's Anomalous Movements Detection (Bachelors Thesis)
I made a program for detecting several kinds of movements in cars using acceleration sensors and signal procesing theory whose data were processed by a neutral network.

CERTIFICATIONS

I usually don't take courses, I read books about the subjects I need.

Institution	Subject	ID and URL
Udemy	Time Series Data Analisis	
Udemy	Git	
Udemy	SQL: Basic to Advanced	
SoloLearn	SQL	
SoloLearn	Java	

COMPLEMENTARY EXPERIENCE

- 2 years — Python libraries for data science like NumPy, Pandas, ScikitLearn, Statsmodels, FacebookProphet, among others.
- 2 years — Mathematical foundations of models for time series analisys, like ARIMA, SARIMA, VARMA, Dickey-Fuller test, Granger causality, Holt-Winters method, EWMA, ETS, Hodrick-Prescott filter, etc.
- 2 years — Experience in parallel programing with OpenMS and MSI libraries in C++, C and Fortran.
- 2 years — Computer vision with OpenCV library in C++ and Python.
- 2 years — Robotic Operative System (ROS) with C++ and Python.
- 2 years — Experience in Keras and TensorFlow for deep learning and machine learning.
- 3 years — Mathematical foundations of dense, convolutional, and recurrent neural networks; as well as evolutionary and nature-inspired algorithms.
- 5 years — Large experience in data visualization with Gnuplot, Tikz-PGF library and Matplotlib (Python).
- 7 years — Use of Linux systems (terminal, etc.).
- 2017 — Engineery of Nuclear Pants Course, at Laguna Verde Nuclear Power Plant.
- 2017 — Nuclear Security Course, at Laguna Verde Nuclear Power Plant.
- 2016 — VII Physics and Nano-structures Workshop, organized by Nanosciences and Nanotechnology Center of UNAM, Ensenada, B.C, Mexico.
  Working in a quantum computing theory subject.

2015 Advanced Summer School 2015, organized by Research and Advenced Studies Center of IPN (National Polytechnic Institute), Cinvestav-IPN.
Advanced topics of math, physics and engineering.

2015 XXV Summer of Science, organized by Mexican Academy of Sciences, at the Institute of Nuclear Sciences of the UNAM (Autonomous National University of Mexico).
Working with data science topics applied to cities databases.

OTHER LANGUAGES

Spanish (native)

CONTACT

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Alberto López

REFERENCES

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