



GUILLERMO MATRANCA
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EDUCATION

Florida International University **Miami, Florida**
B.S. in Physics with a Minor in Mathematical Sciences
Graduation date- May 1, 2007

Florida International University **Miami, Florida**
M.S. in Solid State Physics
Graduation date- June 14, 2012
Link to Thesis- <https://gmatr001.github.io>

COMPUTATIONAL SKILL SETS

Link to some of my source code and analysis - [My Repository](#)

Kubernetes

An orchestration tool that manages microservices in pods and stabilizes the workloads of the application. The nodes in kubernetes (k8s) are handled as an operator with its API server.

Building LAMP stack with CMS

A webserver including PHP modules for dynamic webpages with the help of content management systems like Wordpress and Drupal (I also used turnkey solutions for Linux).

System Administration on a Debian system

Configured the network infrastructure (BIND and DNS) and managed traffic and system processes on Debian OS (also on Ubuntu, and RedHaT OS).

Reading documentation (RTFM)

Capable of searching for the correct documentation of a program and reading it coherently (if the manual is coherent).

Matlab and Mathematica

I used these higher-level languages to obtain solutions in Linear Algebra, Statistical Physics, Quantum Mechanics, and Analysis for the stock market.

Configuring Kernels

Access Linux kernels and configure them to improve performance on particular drivers.

HTML and CSS

Used several templates with this markup language to provide aesthetically pleasing webpages.

FORTRAN and C++

I wrote code in these programming languages to compute and analyze models for physics and other systems like the stock market.

Object Oriented Design in JavaScript and C++

Built Classes and Inheritance.

MySQL, MariaDB

Knowledgeable in creating databases.

Python with PiWheels

I used piwheels' repository to build crypto coins.

Cryptography

I studied Hash functions, Trapdoor function. SHA-1, SHA-256, SHA-512, SHA- , MD-5, RSA Algorithm.*

WORK EXPERIENCE

Baishanlin

Guyana

Project Manager/Data Analyst

May 2019- May 2022

- A mining company where I managed, with a geologist, a team of labor workers in the mining sites to mine gold (Other natural resources like bauxite and diamond were considered for future projects.). I also provided data that we observed and analyzed to our investors and propose future investments of the companies' land.

Miami Dade College-Wolfson/

InterAmerican Campus

Miami, Florida

Adjunct Faculty

August 2015 - January 2019

- Lecturing Physics without Calculus combined with Lab (PHY 2053 and PHY 2053L), Basic Physics (PHY 1025), Energy in the Natural Environment (PSC 1515) and Astronomy (AST 1002).

Law Enforcement Officers Memorial

High School

Miami, Florida

Interventionist

March 2017 - June 2017

- I facilitate and monitor the delivery of specified interventions and assessments related to student achievement for Math and Science.

Claumar

Miami, Florida

Administrative/Executive assistant

August 2011- March 2017

- A wellness center for health and beauty. Assisted in product inventory, managed regulations and policies from the city of Coral Gables, interviewed clients, managed advertisements.

Universal Public Adjusters

Miami, Florida

Insurance Public Adjuster

September 2014-March 2016

- I handle residential, commercial, and aviation property claims. I represent losses for the insured so they can receive a maximum recovery on their claim.

ASPIRA of Florida Charter School

Miami, Florida

Science Teacher

April - June 2014

- I was a teacher for 7th grade General Science class. I taught basic principles for fields in Chemistry, thermodynamics, and electricity.

W.R. Thomas Middle School

Miami, Florida

Mathematics Teacher

November 2013-March 2014

- Taught advance math for 7th and 8th graders in a new program called iprep math.

Miami Dade College-Wolfson Campus

Miami, Florida

Adjunct Faculty

January - August 2013

- Lectured General Education Physical Science (PSC 1121) and Energy in the Natural Environment (PSC 1515).

Switch On (F.I.U)

Miami, Florida

Teacher

Summer 2007

- A state funded program for residential high school students during the summer to learn physics.

CHEPREO (Center for High Energy Physics Research & Education Outreach)

Miami, Florida

Fellow, tutor, and teacher assistant

January 2005 - May 2007

- A program that applies a different approach to learning Physics I & II.

Education Outreach**Miami, Florida***Trainee**Summer 2005*

- A summer workshop that teaches the modeling approach in Physics education.

CCS (Creating Culture in Science)**Miami Dade College-Kendall Campus****Miami, Florida***Tutor**Fall 2002 - Summer 2003*

- Tutored Calculus I & II and Chemistry I & II.

TRAVEL EXPERIENCE

Wuhan National Laboratory for Optoelectronics**Hubei, Wuhan***Establishing Collaborations on Electronic and Optoelectronic Nanomaterial Research**Summer 2011*

- Presented my research and participated in their active research which involved synthesis and applications of carbon nanotubes and semiconducting nanowires in optoelectronic device. [NSF Award](http://www.nsf.gov/awardsearch/showAward?AWD_ID=1043033&HistoricalAwards=false)

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EXTRACURRICULAR ACTIVITIES

Society of Physics Students (SPS)

Spring 2005 - May 2007

- Active member in the FIU chapter

Gambling / Investing

- Forex, Crypto, Webull, Poker, Baccarat, BlackJack.

VOLUNTEER EXPERIENCE

FIU Public Program Star Party

Fall 2006

- Assisted in setting up "Women in Astronomy" event

FIU Physics Open House to High School Students

Spring 2005

- Mentored high school seniors interested in physics.

LANGUAGES

- Bilingual - Fluent speaker and writer in Spanish.
- Computer Languages - FORTRAN, C++, MySQL, JavaScript, LaTeX, HTML and CSS, Python, Perl.

REFERENCES

Dr. Yuehai Yang a.k.a John	Natural Science <i>Department, OIT</i>	813-480-8960
Dr. Yi Li	C.E.O and Founder of Renogy	LiYi@renogy.com
Dr. Xuewen Wang	<i>Department of Physics, FIU</i>	305-348-3956
Dr. Richard Bone	<i>Department of Physics, FIU</i>	305-348-3082
Dr. Brian Raue	<i>Department of Physics, FIU</i>	305-348-6073
Dr. Wenzhi Li	<i>Department of Physics, FIU</i>	305-348-7257
Dr. Jiandi Zhang	<i>Department of Physics, LSU</i>	225-578-4103
Dr. Jorge C. Gibert	<i>Natural Science Department, MDC</i>	305-237-3025