

VICTOR ALEXANDER TORRES S.

Dynamic physics graduate with a strong background in mathematical modelling, statistics, data manipulation/visualization and management skills. Passionate about using data to address complex scientific problems I have gained relevant expertise in research, data analysis, programming and high performance computing. Now, I'm eager to apply my expertise in junior data analyst/scientist roles to tackle real industry-related problems.



CONTACT

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📍 Moudon, Vaud, CH. (open to relocate)
in Victor Torres
📧 @vats1703
🔍 Google Scholar profile (134 citations)

SKILLS

Programming

Python
Mathematica
Bash
C, C++
Java

Operating Systems

MacOS
Linux
Windows

Software & Tools

Data Visualisation
(e.g. matplotlib, seaborn, gnuplot, ...)
Data handling/analysis
(e.g. numpy, scipy, pandas, ...)
Machine Learning libraries
(Sci-kit learn, Pytorch)
Tableau
Git
Office
SQL
HPC
(High Performance Computing)

Languages

Spanish (Native)
English (C1)
Italian (B2)
German (B1)

CERTIFICATIONS

SQL Masterclass: SQL for Data Analytics
(Udemy, 9.5 hours)
Tableau Fundamentals
(DataCamp, 24 hours)

EDUCATION

📅 2020-2023
📍 University of Trento, Trento, Italy
L. Magistrale (M. Sc.) in Physics
One year at Scuola Internazionale Superiore di Studi Avanzati (SISSA) where I followed PhD courses and made my **thesis on Gravitational Waves data analysis**.
Relevant Courses: Statistical Physics, Experimental Methods (Signal Theory). **PhD Courses:** Computational Physics, Neural Networks, Statistical Modeling and Inference, Information theory, Spin glasses and Inference.

📅 2014-2019
📍 Yachay Tech University, Urcuqui, Ecuador
B. Sc. in Physics
Relevant Courses: Algorithms, Numerical Methods, Probability & Statistics, Computational Physics I & II, Mathematical Physics, Dynamical Systems (Chaos Theory), Science Communication.
Achievements: 4 scientific articles published in indexed journals (see below).

EXPERIENCE

📅 10/2019-10/2020
📍 FisioSalud El Oro, Machala (Ecuador)
Assistant to the Manager

- Managed the clinic's budget for financial efficiency and reduced overhead costs.
- Ensured the smooth execution of daily activities and monitored employee performance and conduct.
- Optimization of recruitment and onboarding processes for qualified candidate selection.
- Reviewed client income data to spot trends and created timely promotions, boosting revenue and client involvement using Excel and Tableau.

📅 01/2018 - 04/2020
📍 Yachay Tech University, Urcuqui, Ecuador
Junior Research Assistant
Astrophysics Department:

- Conducted Bayesian data analysis with Python, C and SQL, to estimate properties of astrophysical sources using Gravitational Waves data and high-performance computing.
- Applied mathematical problem-solving techniques to derive analytic solutions to Einstein equations (**Two-published papers**).

Computational Physics Department:

- Executed simulations to estimate properties of carbon nanotubes based materials using Python libraries and high-performance computing (**Two-published papers**).

📅 02/2018 - 04/2018
📍 Simulab in CIDNA, ESPOL, Guayaquil, Ecuador
Research Internship

- Developed python based codes to calculate electronic properties of graphene nano-ribbons.

📅 06/2017 - 01/2018
📍 YT-Innovation Research group, Yachay Tech, Urcuqui, Ecuador
Research Assistant

- EULAC-FOCUS Project, Program H2020 funded by the European Union** Analyzed complex scientific collaboration networks of Andean and Caribbean countries using Scopus and Ucinet 6.

ACHIEVEMENTS, HONOURS AND AWARDS

🏆 **Scholarship**, University of Trento & SISSA (2020-2022)
Best Applicant outside EU, Tuition fees and lives expenses covered

🏆 **Prof. Walter Greiner Award**, Cuba (2018)
Winner of Poster Session in STARS & SMFNS Symposiums

🏆 **Poster Session Award**, Quito-Ecuador (2019)
2nd Place in "XVI Encuentro de Física: Desafíos computacionales en la Física Contemporánea"

SCIENTIFIC PUBLICATIONS

Regularity condition on the anisotropy induced by gravitational decoupling in the framework of MGD



 G. Abellán, **VA Torres-Sánchez**, E. Fuenmayor, E. Contreras

 2020  The European Physical Journal C 80 (2)

 [Journal,arXiv](#)

Understanding the Electron-Doping Mechanism in Potassium-Intercalated Single-Walled Carbon Nanotubes


 C. Kröckel, M.R. Preciado Rivas, **VA Torres-Sánchez**, Mowbray, D.J., et al

 2020  Journal of the American Chemical Society

 [Journal](#)

Anisotropic neutron stars by gravitational decoupling



 **VA Torres-Sánchez**, E. Contreras

 2019  The European Physical Journal C 79 (10)

 [Journal,arXiv](#)

Optical absorption and energy loss spectroscopy of single-walled carbon nanotubes

 M.R. Preciado Rivas, **VA Torres-Sánchez**, Mowbray, D.J.

 2019  Physical Review B (23)

 [Journal,arXiv](#)