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JUAN ALEJANDRO PINTO CASTRO

PROFESIONAL PROFILE

Physicist with more than a year of research experience performing computational calculations, data analysis using python language, and delivery of scientific reports.

I have more than a year of experience in the area of teaching university students and secondary education in the teaching of physics, maths and programming.

SKILLS

- Programming and analysis in python.
- Use of tools like jupyter, google colab, latex, linux, ssh.
- Knowledge of HTML and CSS.
- Repositories (GitHub)

PROFESIONAL EXPERIENCE

PROFESSOR OF PHYSICS, JESÚS EUCARÍSTIA SCHOOL

01/02/2022 - 30/11/2022

I Prepared to students of eleventh grade to Colombian scholastic aptitude test in the fields of electromagnetism, thermodynamics, waves and mechanics. The students reached the highest score in physics compared to last 10 years results.

I taught physics for young students from sixth grade to eleventh grade.

PHYSICS TUTOR, INDUSTRIAL UNIVERSITY OF SANTANDER

06/02/2021 – 30/10/2021
I taught mechanical physics and electromagnetism in the MIDAS program to teach physics and calculus to newbie students.

RESEARCH ASSISTANT, INDUSTRIAL UNIVERSITY OF SANTANDER

05/08/2020 – 05/09/2021
I made computational (optimization, electronic and phononic) calculations of density functional theory (DFT) implemented in the code vasp, installed in supercomputer 'Guane' for the material perovskite-like Ruddlesden-Popper $Sr2\ (T\ a,\ N\ b)O3\ N$.

Post-processing of data with the codes vaspkit for electronic structure and phonopy for phononic structure. Structural energy analysis with python libraries pandas, numpy, seaborn and matplotlib. library pyprocar. Electronic and phononic structure analysis with the software grace and

python library pyprocar and phonopy.

I wrote reports in the markup language latex.

EDUCATION

INDUSTRIAL UNIVERSITY OF SANTANDER — BUCARAMANGA — PHYSICS (2021)

- Degree Project associated with Condensed matter computational physics (FICOMACO) Research group of Industrial University of Santander.
  Purpose: Computational Charactirization (energy, electronic and phononic structure) of material perovskite-like Ruddlesden-Popper $Sr2(Ta, Nb)O3N$ in order to provide more information about the possible ferroelectric behavior.
  Project Director: Andres Camilo Garcia Castro, PhD
- Attendance and participation as a poster at the Virtual MRS spring meeting and exhibit 2021 (EL.09.07.05). Seatle,
- USA: MRS in May 2021.

COMPLEMENTARY EDUCATION

FUNDAMENTALS OF DATA ANALYTICS DS4A BY CORRELATION ONE (2022)

PYTHON PROFESSIONAL COURSE BY PLATZI (2022)

DATA ANALYTICS WITH PYTHON BY OPEN-TECH (2022)

GIT AND GITHUB PROFESSIONAL COURSE (2022)

OOP COURSE (2022)

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