Contact

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⊙ ubeidensamboni + FullCV

in samboni-0812b1196

Skills

Machine Learning: Data cleaning and curation. Data analysis and visualizations. Regression techniques. Supervised and unsupervised models, reinforcement learning.

Protein Purification: Bacterial transformation, plasmid extraction and bacteria lysis. ÄKTA FPLC, size exclusion, HPLC, SDS-PAGE electrophoresis.

Biophysics: Brewster angle microscopy (BAM), differential scanning calorimetry (DSC), Langmuir monolayers, time-correlated single photon counting (TCSPC): fluorescence spectroscopy, dynamic light scattering (DLS), UV-Vis and ATR-FTIR spectroscopy.

Molecular Dynamic Simulation: Gromacs, Visual Molecular Dynamic (VMD), CHARMM-GUI, MDAnalisys, Gaussian 16, NBO 6.0, High Performance Computing (HPC).

Coding

🐍 **Python**: numpy, scipy, pandas, sklearn, XGBoost, seaborn, matplotlib, TensorFlow

🛠️ **Misc**: Bash, Jupyter Lab, Google Colab, Conda, Visual Studio, GitHub, ImageJ, Windows OS, Unix-Ubuntu

Miscellaneous

- **Languages**: Spanish (native), English (PTE Academic UKVI)

- **Membership and Leadership**:
  2020-2023: Young Initiative on Biophysics - **YIB**
  2018-2024: Argentinian Biophysical Society - **SAB**

- **Document Preparation & Design**: LATEX, MS Office, Inkscape, GIMP, Darktable

Conferences

- 2018-2023: SAB and YIB Meetings; Argentina
- 2023: Physics of Live; UK

UBEIDEN **CIFUENTES SAMBONI**

Education

2024	**PhD in Chemistry**	**Universidad Nacional de Córdoba**, Argentina

Specialization: Membrane Protein Biophysics
Advisor: *Dr. Guillermo Montich*

2023 **Diploma in Data Science** **Universidad Nacional de Córdoba**, Argentina

2017 **B.Sc. Chemistry** **Universidad del Quindío**, Colombia
Specialization: Quantum Chemistry - DFT calculations
Advisor: *MSc. Alberto Sánchez López*

Work Experience

2019-2024 Assistant Teacher **Universidad Nacional de Córdoba**, Argentina
Delivery of agreed package of teaching activities to a high standard. These activities may include seminars, classes, tutorials, lab sessions, other small group work to develop student skills, demonstration for experiments/techniques in lab-based science and computing. Monitor and interact with students during the entire lab session. This means circulating throughout the lab section visually monitoring student performances. Grade homework, lab reports, quizzes, and exams according to the directions provided by the course instructor. Collaborated with large and diverse team.

2024|2023 Research Internship **King's College London** London, UK
Conceptualized and evaluated research projects involving molecular dynamics (MD) simulations, ensuring scientific rigor and feasibility. Conducted MD simulations utilizing high-performance computing clusters to generate accurate and reproducible results. Processed and analyzed complex datasets efficiently using advanced Python scripting and automation tools. Designed and presented visually compelling graphs and tables to effectively communicate findings during internal lab meetings. Authored comprehensive reports summarizing simulation outcomes, analyses, and key insights for stakeholders.

2017 Science Teacher **High Shool**, Colombia
To prepare and deliver new teaching material for multiple classes in chemistry, physics, and biology. This has involved designing and implementing engaging and interactive lessons that cater to the diverse learning needs of my students. I have also worked closely with my colleagues to ensure that our teaching methods are aligned with the latest educational research and best practices.

2016 Research Assistant **Universidad del Quindío**, Colombia
Implementation of the ISO 9001 Management and Quality systems for the Pesticides and Health laboratory. Collaborated with large and diverse team and presented results to multiple audiences.

Publications

Cifuentes S. Ubeiden; Berrio V. L. Felipe; Cuenú C. Fernando; García R. Alejandro; Lorenz Christian D.; Sánchez L. Alberto. OPPh$_3$py: Synthesis, Molecular Structure, Reactivity, NBO and Nonlinear Optical Analysis of a Phosphine Oxide. *ACS Au*. **To be submitted soon**.

Cifuentes S. Ubeiden; Godino Agustina; Barra Jose L.; Montich Guillermo G. Interactions of Integrin $\alpha IIb\beta 3$ transmembrane domains with lipids in Langmuir Monolayers. Surface, Mechanical and Topographical Properties. *Langmuir*. **To be submitted soon**.

Cifuentes S. Ubeiden; Ulmschneider Martin; Lorenz Christian D.; Montich Guillermo G.; Galassi Vanesa V. Orientation and Lipid-Peptide Interactions of Integrin $\alpha IIb\beta 3$ Transmembrane Domains in Lipid Bilayers by Molecular Dynamics Simulations. **In preparation**.