

LUCAS SOUZA

Data Scientist | PhD in Physics



Solid background in math/phys/code coupled to my analytical profile, naturally led me to become a Data Scientist. Focused on understand the business/research challenges in order to be able to find the suitable tools for solution and then work on process optimization by implementing machine/deep learning models to deliver value from data. Experience working in agile environment and ability to collaborate with a diverse range of co-workers.

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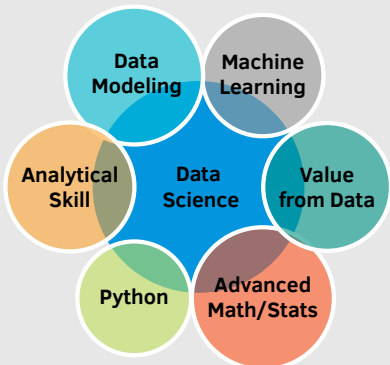


[lucas-alves-souza/](https://www.linkedin.com/in/lucas-alves-souza/)



[lucas-alves-souza](https://discord.com/users/lucas-alves-souza)

Skills



Programming/Software/Toolbox

Python • Git • Linux • \LaTeX
Data Science/ML: Pandas, GeoPandas, Scikit-Learn, Boosting (XG/LGBM), NN, Plotly

Deep Learning (Tensorflow) • Time series (LSTM, AlgoTrading) • Genetic Algorithms

PostgreSQL • C++ • Bash • HTML

Education

2013 - 2017 **Doctorate in Physics**

[Instituto Tecnológico de Aeronáutica, ITA, Brazil](#)

2009 - 2011 **Master's degree**

[Univ. Federal de São João del-Rei, UFSJ, Brazil](#)

2004 - 2008 **Physics Undergraduate**

[Univ. Federal de São João del-Rei, UFSJ, Brazil](#)

Data Science Experience

Sep 2021 - present **Data Scientist (Specialist from Oct 2022)**

[Tenda Construtora, Brazil](#)

- Data science techniques to drive better business decisions.
- Among my day-to-day I use: Python, GitLab, Pandas, Scikit-Learn, XGBoost/LightGBM, Neural Networks, Plotly, Optuna, etc.
- Optimization with Genetic Algorithm.

Research Experience

Oct 2019 - Feb 2020 **Postdoc researcher**

[Instituto Tecnológico de Aeronáutica, ITA, Brazil](#)

- Investigation on short-range correlations in nuclear matter of neutron stars taking high programming to calculate equation of state.

Jul 2017 - Oct 2019 **Postdoc researcher**

[Universidade de São Paulo, USP, Brazil](#)

- Theoretical study on nuclear reactions of neutron-rich nuclei by computing two- and three-body virtual states within nonrelativistic EFT formalism.

Extra Training (notes and scripts → [Github](#))

2022 **Statics for Data Science and Machine Learning**
(Portuguese) 20h, in progress

[IA Expert Academy, Udemey](#)

2022 **TensorFlow: Machine Learning and Deep Learning with Python**
(Portuguese) 19h

[IA Expert Academy](#)

2022 **Genetic Algorithm in Python** (Portuguese) 4,5h

[IA Expert Academy](#)

2021 **The Complete SQL Bootcamp 2022: Go from Zero to Hero** (English) 9h

[Udemey](#)

2021 **Machine Learning and Data Science with Python from A to Z** (Portuguese) 42h

[IA Expert Academy, Udemey](#)

2017 **School on few-body physics** (English) 60h

[MPIPKS, Dresden, Germany](#)

Teaching Experience (2/5 → [CV Lattes](#))

Feb 2019 - Oct 2019 **Professor, 30h**

[Universidade de Taubaté, Unitaú, Brazil](#)

- Professor of Physics and Mathematics and Distance Learning Tutor.

Apr 2018 - Jan 2019 **Temporary Professor, 40h**

[Universidade Federal de Lavras, UFLA, Brazil](#)

- Physics professor for various undergraduate courses.

Publications (2/14 → [Google Scholar](#))

- Sergio Pilling, Mauricio T. Pazzianotto, Lucas A. Souza, [The Astrophysical Journal](#), **921**, 116(2021)
- Lucas A. Souza, Emanuel V. Chimanski and Brett V. Carlson, [Phys. Rev. C](#), **104**, 034623(2021)