Alvaro Franco Martins

Personal Data

ADRESS:	Maringá, Brazil
E-MAIL:	alvarought@gmail.com
PHONE:	+55 44 9 8841-5250
WEBSITE:	alvarofrancomartins.com

Profile

DATA SCIENTIST

Physicist working on complex networks and data science. I have a particular interest in the application of statistical data analysis to uncover patterns in data sets related to criminal activity. My main interests are

- Data Science
- Deep Learning
- Machine Learning
- Data Visualization
- Complex Networks

Education

2021 -

PhD Student
State University of Maringá

As a PhD fellow, I work on the project "Network and data science applied to study corruption and organized crime." My primary goal is to extract meaningful patterns from data on criminal activities, uncovering rules and mechanisms that govern their structure and dynamics.

2019 - 2021

MSc in Physics
State University of Maringá
Thesis: The dynamics of political corruption networks.

2014 - 2018

BSc in Physics
State University of Maringá
Thesis: Time series analysis via complexity-entropy curves.

Awards and fellowships

2021 -

Doctoral fellowship (CAPES)
Academic Cooperation Program (PROCAD) in Public Security and Forensic Sciences

2019 - 2021

Master fellowship (CAPES)

2014 - 2018

Undergraduate research fellowship (CNPq)

Languages

ENGLISH:	TOEFL ITP (600/677)
PORTUGUESE:	Native Language

Technical Skills

PROGRAMMING	Python.
LIBRARIES	numpy, scipy, pandas, matplotlib, scikit-learn, graph-tool.

Publications

2022	D. D. Lopes, B. R. da Cunha, **A. F. Martins**, S. Goncalves, E. K. Lenzi, Q. S. Hanley, M. Perc, H. V. Ribeiro (2022). *Machine learning partners in criminal networks*. Scientific Reports 12, 15746.
2022	**Martins, A. F.**, da Cunha, B. R., Hanley, Q. S., Gonçalves, S., Perc, M., & Ribeiro, H. V. (2022). *Universality of political corruption networks*. Scientific Reports 12, 6858.
2018	Ribeiro, H. V., Alves, L. G., **Martins, A. F.**, Lenzi, E. K., & Perc, M. (2018). *The dynamical structure of political corruption networks*. Journal of Complex Networks 6, 989–1003.