Contato

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www.linkedin.com/in/azdornelles (LinkedIn)
lattes.cnpq.br/2912274112813579 (Personal)
github.com/adornelles/FoodSystemsTransformationArchetyp (Other)

Principais competências

SQL
Python (Programming Language)
Predictive Modeling

Languages

Spanish (Professional Working)
English (Native or Bilingual)
Portuguese (Native or Bilingual)

Certifications

Data Strategy
Machine Learning and AI Foundations: Causal Inference and Modeling
Registered Dietician (RD)

Publications

Towards a bridging concept for undesirable resilience in social-ecological systems.
Transformation archetypes in global food systems
Income inequality and non-communicable disease mortality and morbidity in Brazil States: a longitudinal analysis 2002-2017

André Zuanazzi Dornelles, PhD

Data Science | IA | Systemic Risks Modelling | Translational Science
Porto Alegre, Rio Grande do Sul, Brasil

Resumo

Experienced in analyzing and modeling complex systems, with a focus on dynamic risk assessment across food systems, supply chains, and sustainability frameworks. My recent work involved system-wide risk modelling related to: 1) air quality, food security, and biosecurity (UK context); 2) climate change adaptation (UK, Ghana, India); and 3) nature-climate scenarios & analytics for financial decision-making.

Skilled working with large-scale, multi-layered, longitudinal datasets, applying advanced statistical analysis, predictive modelling, and data visualization techniques.

Key Tools & Skills:
R (tidyverse, mlr3, ggplot2), SQL, Python (NumPy, pandas, TensorFlow);
Visual Studio Code, RStudio, JupyterLab, Git & GitHub;
Analytical techniques: clustering, shock synchrony analysis, multivariate regression, causal inference, Bayesian modelling, and ML pipelines.
Model evaluation (accuracy, precision, ROC/AUC curves) and consequent descriptive, predictive and decision-making capabilities.

Beyond technical expertise, I've contributed to diverse academic and collaborative spaces — including teaching, mentoring, outreach, strategic oversight, committee leadership, and stakeholder engagement.

Experiência

Centro de Inteligência Artificial e Ciência de Dados da PUCRS
Pesquisador de Pós-Doutorado
dezembro de 2025 - Present (8 meses)
Porto Alegre, Rio Grande do Sul, Brazil

Research project: Personalized genetic analysis and therapeutic support for individuals with major depressive disorder (MDD).
This project aims to develop an innovative genetic panel for personalized therapeutic support in MDD, using Larga Language Models (LLMs) and artificial intelligence (AI). The study will integrate genomic data, clinical information, and treatment outcomes to identify and characterize a set of genetic variants with therapeutic relevance. The ultimate goal is to create a practical tool that can be used by healthcare professionals to support personalized and effective treatment decisions, ultimately impacting the prognosis of individuals suffering from the disorder - either via tailored support or bypassing "trial and error" approaches.

University of Reading
Postdoctoral Research Associate
janeiro de 2022 - Present (4 anos 7 meses)

PDRA at EMPOWER project: 'Empowering citizen and community adaptation to systemic risks from climate change'. Website: https://www.empower-project.org/

University of York
Postdoctoral Research Associate
outubro de 2021 - dezembro de 2021 (3 meses)

PDRA at the 'Systemic environmental risk analysis for threats to UK recovery from COVID-19' project. Website: https://www.sysrisk.org.uk/

University of Reading
Academic Mentor for the Disability Advisory Service
2018 - 2020 (2 anos)
Reading, England, United Kingdom

Tailored support for undergraduate academic asssignments and strategic planning for exams and multiple deadlines. Support accessing university and medical services, as necessary.

Grupo Hospitalar Conceição
Nutrition Resident
2017 - 2017 (menos de um ano)
Porto Alegre, Rio Grande do Sul, Brazil

Multidisciplinary health promotion and disease prevention of vulnerable communities in primary health care of the Brazilian Unique Health System - Sistema Único de Saúde (SUS).

Autônomo
Registered Dietitian
2014 - 2016 (2 anos)
Porto Alegre, Rio Grande do Sul, Brazil

Anamnesis, anthropometry (ISAK level 2), and individualised dietary strategy & advise; mainly focused on health promotion and sports performance.

Formação acadêmica

University of Reading
Doctor of Philosophy - PhD, Food Systems · (2017 - 2021)

Imperial College London
Quantitative and Modelling Skills in Ecology and Evolution (QMEE), Research Methodology and Quantitative Methods · (2018 - 2020)

IFSTAL - Interdisciplinary Food Systems Teaching and Learning
Food Systems · (2017 - 2018)

Universidade Federal de Ciências da Saúde de Porto Alegre
Master of Philosophy - MPhil, Epidemiology and Diagnosis Methods · (2013 - 2015)

Universidade Federal de Ciências da Saúde de Porto Alegre
Bachelor of Science - BS, Nutrition & Dietetics · (2009 - 2012)