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CURRENT POSITION

Constructor University - Bremen, Germany 02/2026-Present
Assistant Professor of Computer Science and Engineering
Network Science Representative, Women in Network Science
Board Member, Network Science Society & Complex System Society
Associate Editor of Applied Network Science

CURRENT TEACHING

Applied Machine Intelligence

- Online teaching of contents related to Information Theory, Matrix Decomposition, Neural Network, Deep Learning and Current Applications of Artificial Intelligence

Data Science & Digital Fluency in the Artificial Intelligence-Enabled Enterprise Bootcamps

- In person teaching of courses related to Database and Statistics using Python
- In person teaching of courses related to Introduction to Artificial Intelligence and Data visualization

Supervisions

- 01 (01 completed) PhD Student at the University of Pernambuco (Co-Supervisor)
- 31 (25 completed) MSc Students in courses related to Data Science and Artificial Intelligence (Supervisor)
- 05 (03 completed) BSc Students in research projects (Mentorship)

ONGOING PROJECTS

Human Behaviour, Network Science & Complex Systems

- Studying the Gender, Parenthood and Socioeconomic Patterns of Human Mobility (Mobility)
- Investigating how women and men develop and apply strategies for research success (Science of Science)
- Studying gendered dynamics of engagement, visibility, and interaction on social media (Online communication)
- Evaluating cohort homophily and heterogeneity as drivers of student persistence in STEM (Education)

Explained AI, Responsible AI & The Impact of AI

- Modelling social interaction networks to uncover mechanisms of Swarm Intelligence (Explained AI)
- Deploying digital platforms in different countries to collect data of individual preferences in policy proposals (Digital Democracy)
- Deploying experiments in different countries to collect data of individual perception, memory, and behaviour (Human Behaviour)
- Studying human perceptions and perspectives on the use of AI tools (Impact of AI)
- Applying reinforcement learning to optimize hyperparameterisation in machine learning (Machine Learning)

ACADEMIC PROJECTS

- Implemented Particle Swarm Optimization (PSO), Genetic Algorithms (GA) and Fish School Search (FSS) using Java to optimize and compare complex functions.
- Improved a PSO code using State Machine and Fuzzy Logic concepts to control the Energy Consumption of a Swarm of Unmanned Aerial Vehicles (Java)
- Implemented Ant Colony Optimization (ACO) and GA using Java to create a personalized playlist of songs
- Implemented FSS and Multilayer Perceptron (MLP) using Java to determine the major resources that could improve Pernambuco's (a state in Brazil) public safety
- Implemented Genetic Programming (GP) to forecast Time Series
- Executed Knowledge Discovery in Databases (KDD) to identify major problems of Pernambuco such as traffic accidents
- Implemented clustering algorithms to identify students' profile from a Brazilian educational platform
- Created, developed and applied a multi-objective algorithm inspired on FSS family algorithms to solve binary problems
- Improved breast cancer diagnosis using a Brazilian dataset of thermography images

EDUCATION

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|---|-------------------|
| University of Exeter - Exeter, Devon, UK. | 09/2018 - 12/2021 |
| PhD Student in Computer Science - <i>University of Exeter's Scholarship</i> | |
| Florida Institute of Technology - Melbourne, Florida, USA. | 01/2018 - 07/2018 |
| PhD Student in Computer Science - <i>Graduate Student Assistant Scholarship</i> | |
| Universidade de Pernambuco - Recife, Pernambuco, Brazil | 08/2016 - 11/2017 |
| MSc in Computer Engineering - <i>UPE-PFA and CNPq Scholarship</i> | |
| Pace University - New York, NY, USA | 06/2014 - 08/2015 |
| Visiting International Student - <i>Brazil Scientific Mobility Program Fully-Funded Scholarship Recipient</i> | |
| Universidade de Pernambuco - Recife, Pernambuco, Brazil | 08/2010 - 07/2016 |
| BSc Computer Engineering- <i>Scientific Scholarship (2012-13) from CNPq</i> | |

WORK EXPERIENCE

Northeastern University London

Assistant Professor (11/2023 - 02/2026)

- Taught Programming for Data Science, Applied Machine Intelligence and Bootcamps
- Moderator of the courses of Object-Oriented Programming, Data Synthesis and Programming for Data Science
- Associate Director of Belonging for the Computing, Mathematics, Engineering, and Natural Sciences (CoMENS) Faculties

University of Toulouse

Postdoctoral researcher (01/2022 - 11/2023)

- Develop digital platforms for improving political awareness in France
- Analyse individual preferences of political proposals in multiple countries for understanding the extent in which candidates cover what the population stands
- Study human behaviour while interacting with different games and experiments in online platforms for understanding sociodemographic differences on collective memory
- Teach Advanced Topics in Artificial Intelligence and Data Analysis for master's students

University of Exeter

Postgraduate Teaching Assistant (01/2021 - 05/2021)

- Assisted on the module Object-oriented Programming explaining the material and exercises and running tutorials
- Wrote, Helped and Graded Projects

Nokia Bell Labs

Machine Learning Intern (05/2019 - 07/2020)

- Develop research/framework using Natural Language Processing to improve the human knowledge consumption

Florida Institute of Technology

Graduate Mentor (05/2018 - 07/2018)

- Develop research with two undergraduate students to create and analyse interaction networks from the social interactions of swarm-based algorithms to understand why Swarm Intelligence works. Funded by the National Science Foundation
- Manage the research by organizing and dividing tasks through the group considering the undergraduate limitations and desires. Funded by the National Science Foundation

Graduate Student Assistant (01/2018 - 05/2018)

- Taught material of Programming Language C/C++ and Data Structures helping students solving challenging problems
- Graded Quizzes and Assignments

Artics Mobile

Intern (05/2015 - 08/2016)

- Developed Web and mobile applications including front-end, back-end, tests and functionalities using Appcelerator, Calabash, JavaScript, HTML, PHP and Node.js

University of Pernambuco

Postgraduate Teaching Assistant (08/2016 - 12/2016)

- Taught material of Swarm Intelligence helping students programming algorithms

Technical Masters Lab Assistant (08/2013 - 06/2014)

- Managed hardware and software computer problems to ensure all the computers in the lab persisted working
- Catalogued and organized academic documents
- Responsible for collecting financial documents signatures to ensure department investments

JOURNALS & CONFERENCES

- Associate Editor of Applied Network Science
- Guest Editor of the special issue "Network Approaches to Urban Inequality: Spatial, Social, and Systemic Perspectives" in Applied Network Science (2025)
- Guest Editor of the special issue "Networked Inequality: Studies on Diversity and Marginalization" in Applied Network Science (2022)
- Attended and/or presented in Swarm Intelligence, Artificial Intelligence, Machine Learning and Complex Networks' conferences (LACCI, CBIC, BRICS, GECCO, COMPLENET, NETSCI, IC2S2, CCS)

BRICS-CCI/CBIC

Organizer (2013)

- Use Portuguese and English language skills to assist international conference attendees with translating the agenda and helping in their needs
- Helped in the registration of participants to ensure all attendees could access permitted areas
- Responsible for the organization of lectures' room to aiding speakers

COMPLENET

Organizer (2020,2021,2024,2025)

- Helped on the organization of the program and virtual platform
- Assisted attendees and speakers
- Program Chair in 2024 and 2025

Conference on Complex Systems (CCS)

- Organised a satellite about Equality and Fairness - CCS23
- Satellite Chair in CCS24

EXTERNAL MASTER'S DEFENSE COMMITTEE

- "Modelling urban environments using mobile phone and online data" defended by Thomas Ryan Collins in September 2025 at the University of Exeter
- "Using imitation learning and population-based learning to optimize: performance and transferability" defended by Gabriel Anunciação Kopte in October 2023 at the University of Pernambuco, Pernambuco, Recife, Brazil
- "Artificial Neural Networks to estimate thermomechanical paste consistency" defended by Rodrigo Cesar Matheus in March 2023 and August 2024 at the Federal University of Technology, Paraná, Ponta Grossa, Brazil

OUTREACH ACTIVITIES

- Participated and helped on women and young events to encourage high school or undergraduate students to Computer Science field (academic and course, 2018-2020)
- Active participant in the book club and postgraduate activities on Women in Network Science to encourage and help women to feel included in academia (2020-Present)
- Part of the Executive Committee of Women in Network Science (2025-Present)
- Board Member of Complex System Society and Network Science Society (2025-Present)

AWARDS

- Best project at the XV University Week at the University of Pernambuco in 2016
- Undergraduate scientific scholarship from National Council for Scientific and Technological Development in Brazil (2012-2013)
- Visiting International Student for one year at Pace University (NY-USA) fully funded by Brazil Scientific Mobility Program
- Master's degree scholarship from University of Pernambuco and National Council for Scientific and Technological Development in Brazil (2016-2017)
- PhD fully funded for 3 years and 9 months by University of Exeter (Devon-UK)
- Outstanding Intern 2019 at Nokia Bell Labs
- Best presentation at EMPS Conference 2020 in the Computer Science department at the University of Exeter
- Second best presentation at CompleNet 2021

LANGUAGES

Portuguese (native)

English (fluent)

Spanish (beginner)

French (studying, beginner, 2.5 years)

German (studying, beginner, 8 months)

TECHNICAL SKILLS

Courses Taught: **Swarm Intelligence***, **Programming***, **Data Analysis***, **Machine Learning***

Computer Languages: **Java***, **C**, **C++**, **PHP**, **Python***, **Assembly**, **Haskell**, **XML**

Databases: **MySQL**, **Elasticsearch (NoSQL)**

Web & Mobile Knowledge: **CSS**, **HTML**, **JavaScript**, **jQuery Framework**, **Node.js**, **Ionic**, **Appcelerator**

Operating Systems: **Windows**, **Linux***, **OS X***

Methodologies: **SCRUM**, **RUP**, **XP**

Tools: **R**, **MATLAB**, **Apache**, **SVN**, **Eclipse***, **PyCharm**, **GitHub***, **Bitbucket***, **Kibana**, **Jupyter Notebook***, **QGIS**

***Mostly developed**

RESEARCH INTERESTS

Artificial Intelligence

Swarm Intelligence, Evolutionary Computation, Neural Networks, Data Analysis

Human Behaviour

Human Mobility, Gender Inequality, Social Mobility, Academic Mobility, Science of Science,

Social Network Analysis, Communication Patterns, Mental Health

Urban Systems

Geospatial Analysis, Economic Development, Cities, Urban Modelling