

TIAGO PINHO DA SILVA

Ph.D. Student

@ tpinho@usp.br +55 (92) 9284 - 1298 São Carlos, SP, Brazil
in linkedin.com/in/tiagopinhodasilva/ github.com/tpinhoda orcid.org/0000-0001-9381-0982

EDUCATION

Research Practicum

University of New South Wales

📅 April 2021 – Ongoing 📍 Sidney, NSW - Australia

Ph.D. Candidate

University of São Paulo (USP)

📅 April 2018 – Ongoing 📍 São Carlos, SP - Brazil

- GPA: 4.0/4.0

Master of Computer Science

Federal University of São Carlos (UFSCAR)

📅 Feb 2016 – Apr 2018 📍 São Carlos, SP - Brazil

- GPA: 3.71/4.0

Bachelor in Computer Science

Federal University of Amazonas (UFAM)

📅 Feb 2010 – Nov 2015 📍 Manaus, AM - Brazil

- GPA 7.60/10
- Exchange student at **Saint John's University** fully funded by the "Brazilian Scientific Mobility Program" for the period of June 2013 to Dec 2013
- Exchange student at **Stevens Institute of Technology** fully funded by the "Brazilian Scientific Mobility Program" for the period of Jan 2014 to May 2014

RESEARCH EXPERIENCE

PhD Student

Election Forensics: Detecting Patterns and Outliers on a Spatial Graph-Based Representation of Electoral Data Under Spatial-Non Stationarity

📅 Apr 2018 – Ongoing 📍 USP, Laboratório de Inteligência Computacional

In this research project, we aim the proposal and development of a machine learning pipeline to help understand voting behavior on democratic elections results through different data sources (i.e., census, crime data, and news). Due to the spatial nature of electoral data, its inherent spatial dependence characteristic requires new solutions on the traditional machine learning pipeline that goes from the proposal of new cross-validation techniques to handle data with spatial dependence to the development of reliable and interpretable machine learning methods that can take advantage of the dataset spatial structure.

São Carlos Crime Data Analysis

📅 Nov 2019 – Feb 2020 📍 USP, Laboratório de Inteligência Computacional

In this research project we aim to map crimes in the city of São Carlos by building a system for the city police department to visualize and detect hot spots (i.e places with high frequency of crimes).

ACADEMIC HONORS



WCCI Travel Grant - Jul/2018

Awarded by *IEEE Computational Intelligence Society*



PhD Schorlarhip - Apr/2018

Fully funded by CAPES (*Brazilian Coordination for the Improvement of Higher Education Personnel*) for the project "Election Forensics: Detecting Patterns and Outliers on a Spatial Graph-Based Representation of Electoral Data Under Spatial-Non Stationarity".



MSc Schorlarhip - Feb/2016

Fully funded by CAPES (*Brazilian Coordination for the Improvement of Higher Education Personnel*) for the project "Data Streams Classification and Novelty Detection Under Non-Stationary Environments".



Institutional Scientific Initiation Scholarship Program - Nov/2014

Provided by *INdT (Nokia Institute of Technology)* for the project "Identifying Jaguars in Camera Trap Images Using Deep Learning".



Brazilian Scientific Mobility Program Scholarship 2013-2014

Provided by CAPES (*Brazilian Coordination for the Improvement of Higher Education Personnel*) to study for a year in an oversea University.



Institutional Scientific Initiation Scholarship Program - 2011-2013

Provided by FAPEAM (*Amazonas Research Support Foundation*) for the projects "Automatic Generation of Snippets for Products" and "Detecting Regular Regions in HTML Pages"

MSc Student

Data Streams Classification and Novelty Detection Under Non-Stationary Environments

📅 Feb 2016 – Apr 2018

📍 UFSCAR, Computational Intelligence Group

In this research project we aimed to develop adapting machine learning methods for the task of classification in Data Streams in scenarios where data distribution changes and new classes arrives over time.

Undergrad Student

Identifying Jaguars in Camera Trap Images Using Deep Learning

📅 Nov 2014 – Nov 2015

📍 Federal University of Amazonas

In this research project we aimed to assist in the monitoring of Jaguars in the Mauá Reservation located in the State of Amazonas, by developing a Convolutional Neural Network to classify whether an given image presented or not a jaguar. The images were obtained from camera traps located strategically in the Reservation.

Automatic Generation of Snippets for Products

📅 Jul 2012 – Jul 2013

📍 Federal University of Amazonas

In this research project we aimed to develop an algorithm to automatic generate snippets to each product existing in a e-commerce page containing a list of products.

Detecting Regular Regions in HTML Pages

📅 Jul 2011 – Jul 2012

📍 Federal University of Amazonas

In this research project we aimed to develop an algorithm to detect repeating structures in html codes, such structures could be, for instance, list of products or a list of links.

PUBLICATIONS

A Graph-Based Spatial Cross-Validation Approach for Assessing Models Learned with Selected Features to Understand Election Results

ICMLA

📅 Dec 2021

👤 Tiago P. da Silva, Antonio R.S. Parmezan, Gustavo E.A.P.A Batista
DOI: 10.1109/ICMLA52953.2021.00150

Analyzing spatio-temporal voting patterns in Brazilian elections through a simple data science pipeline

JIDM

📅 Aug 2021

👤 Lucas H.M. Jacintho, Tiago P. da Silva, Antonio R.S. Parmezan, Gustavo E.A.P.A Batista
DOI: 10.5753/jidm.2021.1932

Brazilian Presidential Elections: Analysing Voting Patterns in Time and Space Using a Simple Data Science Pipeline

KDMILE

📅 Oct 2020

👤 Lucas H.M. Jacintho, Tiago P. da Silva, Antonio R.S. Parmezan, Gustavo E.A.P.A Batista
DOI: 10.5753/kdmile.2020.11979

LANGUAGES

Portuguese

English

Chinese



STRENGTHS

Python

R

Machine Learning

Data Science

Data Visualization

Data Streams

Spatial Data Analysis

REFEREES

Dr. Gustavo E.A.P.A. Batista

@ University of New South Wales

✉ g.batista@unsw.edu.au

Dr. Heloisa de Arruda Camargo

@ Federal University of São Carlos

✉ heloisa@dc.ufscar.br

Dr. Ricardo Marcondes Marcacini

@ University of São Paulo

✉ ricardo.marcacini@gmail.com

Luis Gustavo Nonato

@ University of São Paulo

✉ lgustavo.nonato@gmail.com

A Fuzzy Approach for Classification and Novelty Detection in Data Streams Under Intermediate Latency

BRACIS

 Oct 2020

 Andre L. Cristiani, [Tiago P. da Silva](#), Heloisa A. Camargo

DOI: [10.1007/978-3-030-61380-8_12](https://doi.org/10.1007/978-3-030-61380-8_12)

Possibilistic Approach For Novelty Detection In Data Streams

FUZZIEEE 2020

 Jul 2020


 Tiago P. da Silva, Heloisa A. Camargo

DOI: [10.1109/FUZZ48607.2020.9177582](https://doi.org/10.1109/FUZZ48607.2020.9177582)

A Fuzzy Classifier for Data Streams with Infinitely Delayed Labels

CIARP 2019

 Nov 2019

 Tiago P. da Silva, Vinicius M. de Souza, Heloisa A. Camargo, Gustavo E.A.P.A Batista

DOI: [10.1007/978-3-030-13469-3_34](https://doi.org/10.1007/978-3-030-13469-3_34)

Evaluating Vector Representations from User's Reviews in a Recommendation Task

ENIAC 2019

 Oct 2019

 Vitor R. Tonon, [Tiago P. da Silva](#), Vinicius Ferreira, Gean T. Pereira, Solange O. Rezende

<https://sol.sbc.org.br/index.php/eniac/article/view/9291/9193>

A Fuzzy Multiclass Novelty Detector for Data Streams

FUZZIEEE 2018

 Jul 2018

 Tiago P. da Silva, Leonarno Shick, Pricila L. de Abreu, Heloisa A. Camargo

DOI: [10.1109/Fuzz-IEEE.2018.8491545](https://doi.org/10.1109/Fuzz-IEEE.2018.8491545)

Evaluating stream classifiers with delayed labels information

BRACIS 2018

 Oct 2018

 Vinicius M. de Souza, [Tiago P. da Silva](#), Gustavo E.A.P.A. Batista

DOI: [10.1109/BRACIS.2018.00077](https://doi.org/10.1109/BRACIS.2018.00077)

A Fuzzy Variant for On-Demand Data Stream Classification

BRACIS 2017

 Oct 2017

 Tiago P. da Silva, Gerson Urban, Priscila L. de Abreu, Heloisa A. Camargo

DOI: [10.1109/BRACIS.2017.60](https://doi.org/10.1109/BRACIS.2017.60)

POSTERS

Identifying Flux Ropes signatures using Deep Learning

AGU FALL Meeting 2019


 Dez 2019

 San Francisco, CA - USA

 Luiz F. G. dos Santos, Ayris Narock, Teresa Nieves-Chinchilla, Marlon Nunez, [Tiago P. da Silva](#), Michael S Kirk, Barbara J Thompson

Using Machine Learning techniques to classify Flux Ropes from WIND data

AGU FALL Meeting 2018

 Dez 2018

 Washington, DC - USA

 Luiz F. G. dos Santos, Teresa Nieves-Chinchilla, [Tiago P. da Silva](#), Michael Kirk, Barbara Thompson