Anderson Reis **Soares**

PERSONAL INFORMATION

Name	*Anderson Reis Soares*
Address	*Rua Presidente Delfim Moreira, 681 Ap 201* *58035-260 João Pessoa - PB, Brazil*
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E-mail	*andersonreis.geo@gmail.com*
Nationality	Brazilian
Date of birth	14.02.1991

WORK EXPERIENCE

Since 01/2021

SENIOR DATA SCIENTIST AT BAYER CROP SCIENCE PER COGNIZANT BRAZIL
Description: Responsible for the development of workflows and frameworks for subfield monitoring and delineation.

06/2019-12/2020

RESEARCH COLLABORATOR AT BRAZILIAN NATIONAL INSTITUTE FOR SPACE RESEARCH (INPE)
At São José dos Campos – São Paulo, Brazil
Description: Developed and explored new techniques for land use and land cover mapping based on satellite imagery time series.

12/2018-11/2020

CO-FOUNDER AT NITENTECH TECNOLOGIA DA INFORMAÇÃO LTDA
Orion Plataform
Description: Acted as chief of knowledge operations, responsible for the development of the system, from database modelling to UI design.

11/2013-04/2014

GIS SPECIALIST AT INCITI – PESQUISA E INOVAÇÃO PARA AS CIDADES
At Recife, Pernambuco, Brazil
Description: Responsible to provide spatial analysis and data management to support urban planning decisions.

EDUCATION AND TRAINING

02/2015 – 04/2019

BRAZILIAN NATIONAL INSTITUTE FOR SPACE RESEARCH (INPE)
PhD in Remote Sensing
Main subjects: Image Processing and Remote Sensing
Thesis: Contextual Segmentation Method for Optical Remote Sensing Imagery based on the theory of Conditional Random Fields

03/2013 - 01/2015

FEDERAL UNIVERSITY OF PERNAMBUCO
Master in Geodetic Sciences and Geoinformation Technology
Main subjects: Remote Sensing and Image processing
Thesis: Assessment of Atmospheric Correction of Orbital Images Using Integrated Water Vapor Obtained by Numerical Weather Prediction Model

02/2009 - 12/2012

FEDERAL INSTITUTE FOR EDUCATION SCIENCE AND TECHNOLOGY PARAÍBA
Bachelor (Technologist) in Geoprocessing
Main subjects Remote Sensing and GIS

Research Projects

05/2019 – 12/2020

BRAZIL DATA CUBE
Founding Agency: *São Paulo Research Foundation (FAPESP).*
Project Leader: *Karine Reis Ferreira, Ph.D., INPE.*

08/2011 – 06/2012

COMPARISON BETWEEN RESULTS OF INTRAURBAN VENTILATION STUDIES OBTAINED THROUGH EXPERIMENTS IN WIND TUNNELS AND IN COMPUTATIONAL SIMULATION THROUGH THE ENVI-MET SOFTWARE
Project Leader: *Dr. Homero Jorge Matos de Carvalho*

03/2011 – 07/2011

CALIBRATION OF THE ENVI-MET SOFTWARE TO THE CLIMATE OF JOÃO PESSOA PB: APPLICATION TO THE JOÃO PESSOA IFPB CAMPUS
Project Leader: *Dr. Homero Jorge Matos de Carvalho*

Scholarships

02/2015 – 04/2019

BRAZILIAN NATIONAL COUNCIL FOR SCIENTIFIC AND DEVELOPMENT (CNPQ)
PhD. Scholarship
Grant n°140681/2015-9

03/2013 - 01/2015

COORDINATION FOR THE IMPROVEMENT OF HIGHER EDUCATION PERSONNEL (CAPES)
Master's Scholarship

09/2011 - 08/2012

BRAZILIAN NATIONAL COUNCIL FOR SCIENTIFIC AND DEVELOPMENT (CNPQ)
Institutional Scientific Initiation Scholarship Program (PIBIC)

03/2011 - 07/2011

BRAZILIAN NATIONAL COUNCIL FOR SCIENTIFIC AND DEVELOPMENT (CNPQ)
Institutional Scientific Initiation Scholarship Program (PIBIC)

Languages

PORTUGUESE - *Mother Tongue*
ENGLISH - *Fluent*
GERMAN -*Elementary*
FRENCH - *Elementary*

Technical skills and competences

KNOWLEDGE DRIVEN MACHINE LEARNING APPROACHES- *Advance skills*
PYTHON - *Advance Skills*
ARCGIS, QGIS - *Intermediate skills*
MATLAB - *Intermediate skills*
MS OFFICE- *Intermediate skills*
ENVI, ECOGNITION - *Basic skills*
GIT - *Basic skills*
POSTGRESQL, POSTGIS - *Basic skills*
R - *Basic Skills*

Packages and Algorithms
https://github.com/andersonreisoares/

STMETRICS – *A python package for earth observation data cube feature extraction.*

SIMPLE NON-LINEAR ITERATIVE TEMPORAL CLUSTERING - *A spatial-temporal segmentation method for satellite image time series - available with stmetrics.*

UCS – *An unsupervised segmentation algorithm based on conditional random fields.*

DIVIDE AND SEGMENT- *Creation of semantic meaningful tiles for parallel segmentation.*

PUBLICATIONS

A. Time-series metrics applied to land use and land cover mapping with focus on landslide detection. Uehara et al. 2022. Journal of Applied Remote Sensing

B. Hierarchical mapping of Brazilian Savanna (Cerrado) physiognomies based on deep learning. Neves et al. 2021. Journal of Applied Remote Sensing.

C. Government policies endanger the indigenous peoples of the Brazilian Amazon. Conceição et al. 2021. Land Use Policy.

D. CBERS data cubes for land use and land cover mapping in the Brazilian Cerrado agricultural belt. Chaves et al. 2021. International Journal of Remote Sensing.

E. Pattern Recognition and Remote Sensing techniques applied to Land Use and Land Cover mapping in the Brazilian Savannah. Fonseca et al. 2021. Pattern Recognition Letters.

F. Earth Observation Data Cubes for Brazil: Requirements, Methodology and Products. Reis et al. 2020. Remote Sensing.

G. Simple Non-Linear Iterative Temporal Clustering. A. R. Soares et al. IEEE Transactions on Geosciences and Remote Sensing.2020.

H. STMETRICS: A Python Package For Satellite Image Time-Series Feature Extraction. A. R. Soares et al. 2020. 2020 IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2020).

I. Phenological objects: Towards object-based analysis H. Bendini, L. M. G. Fonseca, A. R Soares, T. S. Körting. 2020, GEOBIA 2020.

J. Comparison of Cloud Cover Detection Algorithms on Sentinel–2 Images of the Amazon Tropical Forest AH Sanchez, et al., Remote Sensing, 12 (8), 1284, 2020

K. Hierarchical Classification of Brazilian Savanna Physiognomies Using Very High Spatial Resolution Image, Superpixel and Geobia A K Neves, T S Körting, C D G Neto, A R Soares, L M G Fonseca IGARSS 2019. IEEE International Geoscience and Remote Sensing Symposium, 2019.

L. An Unsupervised Segmentation Algorithm for Remote Sensing Images A Soares, T Körting, L Fonseca GEOBIA 2018-From pixels to ecosystems and global sustainability, 2018.

M. Mapping Brazilian Savanna Physiognomies using WorldView-2 Imagery and Geographic Object Based Image Analysis C D G Neto, L M G Fonseca, T S Körting, A R Soares GEOBIA 2018-From pixels to ecosystems and global sustainability, 2018

N. First experiments using the image foresting transform (IFT) algorithm for segmentation of remote sensing imagery A R Soares, T S Korting, L M G Fonseca, GEOBIA-2016, 2016

O. Improvements of the divide and segment method for parallel image segmentation A R Soares, T S Körting, L M G Fonseca, Brazilian Journal of Cartography, 2015