

João Pedro Mancio de Amorim

PHYSICAL OCEANOGRAPHER · DATA ANALYST

São Paulo, Brasil

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Summary

I'm a Physical Oceanographer with more than 6 years of data analysis and programming. During my career, I had the opportunity to work mainly with time series and environmental data. I have solid knowledge of scientific programming in MatLab and Python and experience in Linux environment. I believe that my academic background aligned with the experience into research projects from large environmental companies gave me the necessary scientific rigor to solve problems quickly using data-driven arguments. Also, I'm a tech enthusiast with a huge interest and self-motivation to learn topics like artificial intelligence and data science applied to solve daily problems.

Skills

PROGRAMMING

Python: Experience with data analysis and modelling using Pandas, NumPy, SciKit, SciPy and CartoPy.

MATLAB: Experience with data Analysis.

LaTeX: Elaboration of documents.

SQL: Basic concepts of database management.

NoSQL: Basic concepts of database management using MongoDB.

Spark: Basic concepts of database management involving PySpark.sql and PySpark.mllib.

LANGUAGES

English: Advanced (C2 - TOEFL ITP)

Spanish: Basic

Portuguese: Fluent (Native)

Work Experience

Fundação Universidade de São Paulo

São Paulo, Brasil

PHYSICAL OCEANOGRAPHER

Mar. 2021 - Present

- Research and development activities within the Santos Basin Regional Characterization Program in a partnership between Petróleo Brasileiro S.A (PETROBRAS) and the Ocean Dynamics Laboratory at University of São Paulo.
- Built a methodology using Gauss-Markov projection to extrapolate velocity measurements at Santos Basin.
- Processed and analyzed *in situ* data from oceanographic cruises, moored current meters, global satellite maps, ocean models outputs and drifters data with focus on understanding regional circulation.
- Wrote technical and scientific reports for PETROBRAS.
- Technologies: Python, Jupyter, Objected Oriented Programming.

Fundação Espirito Santense de Tecnologia

Espirito Santo, Brasil

RESEARCH SUPERVISOR

Mar. 2020 - Jan. 2021

- Developed research activities into the Ocean Modelling group at Rede Rio Doce Mar funded by Renova Foundation (Samarco & Vale).
- Analyzed time-series data from *in situ* measurements at the continental shelf.
- Developed and analyzed modelling experiments using CROCO Ocean Model.

Academic Experience

Universidade de São Paulo

São Paulo, Brasil

POSTGRADUATE STUDENT

Jan. 2018 - Feb. 2020

- Member of the Satellite Oceanography Laboratory
- MATLAB and Python programming to perform time-frequency domain analyses on time-series from a total of 4 global ocean model outputs in the Atlantic Ocean.

Fundação Amazônia de Amparo a Estudos e Pesquisas

Pará, Brasil

INTERNSHIP

2017

- Developed research activities as an internship at the project *Implementation of an Observatory at Amazon Coast: OCA Project*.

Universidade Federal do Pará

Pará, Brasil

SCIENTIFIC INITIATION AT PHYSICAL OCEANOGRAPHY LABORATORY

2015-2017

- Microsoft Excel and MATLAB programming to analyze meteo-oceanographic data in two different research projects.

Education

Universidade de São Paulo

MSC. IN SCIENCES: PHYSICAL OCEANOGRAPHY

São Paulo, Brasil

Jan. 2018 - Fev. 2020

Universidade Federal do Pará

B.S. IN OCEANOGRAPHY

Pará, Brasil

Jan. 2014 - Jan. 2018

- Got a Young Talents to Science Scholarship from CAPES which was given to promising students in Brasil.

Complementary Courses

Instituto de Gestão em Tecnologia da Informação

DATA SCIENCE SPECIALIZATION AND PROFESSIONAL COURSE ON MACHINE LEARNING ENGINEERING

508h

American School of Languages

ADVANCED COURSE IN ENGLISH

680h

Universidade Federal do Pará

STATISTICS APPLIED TO TIME SERIES

30h

Udemy Online Courses

COMPLETE PYTHON BOOTCAMP

24h

Extracurricular Activity

Polícia Federal do Brasil

VOLUNTARY CONSULTANT

Santa Catarina, Brasil

Jun. 2021

- Together with professional colleagues I used a lagrangian tool and conducted modelling experiments to help an investigation from Policia Federal do Brasil about international drug traffic on Brazilian waters.

Faculdade de Oceanografia - Universidade Federal do Pará

UNDERGRADUATE SUPERVISOR

Pará, Brasil

2021

- Mentored and supervised the conclusion work from the student Matheus Lindemberg de Sousa Fernandes titled 'VARIABILIDADE ESPAÇO TEMPORAL DA CLOROFILA-A E TEMPERATURA DA SUPERFÍCIE DO MAR NO OCEANO ATLÂNTICO TROPICAL'.

Peer-Reviewed Publications

A vertical mode extrapolation applied to the Brazil Current domain: quasi-synoptic scenarios

Ocean and Coastal Research

AMORIM, J. P. M., SILVEIRA, I. C. A DA, BORGES-SILVA, M., SOUZA-NETO, P. W. M., LAZANEO, C. Z., BERNARDO, P. S., MARTINS, R. C., DOTTORI, M., BELO, W. C., MARTINS, R. P., MOREIRA, D. L.

2022 - Submitted

Oceanographic conditions of the continental slope and deep waters in Santos Basin: the SANSED cruise.

Ocean and Coastal Research

SILVEIRA, I. C. A DA, LAZANEO, C. Z., AMORIM, J. P. M., BORGES-SILVA, M., BERNARDO, P. S., MARTINS, R. C., SANTOS, D. M. C., DOTTORI, M., BELO, W. C., MARTINS, R. P., MOREIRA, D. L.

2022 - Accepted