Denise Fukai
Data Scientist and Oceanographer

Last update: November 15, 2024

Residence	🏠 Serra/ES - BR
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Up-to-date version of CV is available at
⦿ https://denisefukai.github.io/curriculum_vitae

Data Scientist and Oceanographer with a strong background in environmental data analysis and climate science. Proficient in Python, data visualization, and technical reporting. Constantly leveraging my analytical skills and experience in oceanography.

Education and Training

2012/1 - 2019/2
B.S. in **Oceanography**
UFES - Federal University of Espirito Santo
Vitoria, Brazil

2014/2 - 2015/1
Undergraduate Exchange in **Oceanography**
UNSW - University of New South Wales
Sydney, Australia

2019/1 - 2023
M.S. in **Meteorology**
UFRJ - Federal University of Rio de Janeiro
Rio de Janeiro, Brazil

Professional Experience

Oct/2022 - present
Vortex Mundus

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vortexmundus.com | Rio de Janeiro,RJ
Wave spectral data analysis focusing on evaluation of data to support offshore navigation
operations. Development of new methodologies, preprocessing and evaluation of data
used by the clients.
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`python` `data analysis` `data visualisation` `report writing`

2019 - 2022
MOVAR Project

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Climate model data analysis: retrieving, transforming, regridding global multidimensional data,
in order to analyse the South Atlantic Ocean water temperature and salinity sctructure
and projected changes under a warming scenario.
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`data analysis` `python` `data acquisition` `model data analysis`

Jul - Dec 2018
EGS Brasil Internship

EGS Survey Brasil - Survey solutions for marine projects
Activity: Meteoceanographic data processing (wave and current profilers & CTD; meteorological
station data), and elaboration of technical reports

`python` `wave analysis` `environmental monitoring` `report writing` `raw data`

2017 - 2022

CAPES Beach Morphodynamic Response of the Southeast of Brazil to the Sea Level Rise and Extremes Meteo-oceanographic Events until 2100

Research Collaborator (Data Analyst Support)
Project: This 4 years project aims to understand the short and long term local impacts
and projections for the southeast Brazilian coast due to climate change. The analysis
focus on extreme wave events, sea level and hydrodynamical changes and combined coastal
inundation processes.
CAPES project registration no: 88887.145855/2017.00

`data science` `wave analysis` `climate projection` `coastal processes`

Dec/2014 - Feb/2015

ARCCSS Summer Research Scholarship

Project: "Ocean-atmosphere interaction analysis through the first version of
recharge oscillator model"
ARCCSS / IMAS - Australia
Supervisor: Eric Oliver, Neil Holbrook, Catia Domingues, James Risbey

`ENSO` `mode variability`

Scholarships, courses and others

2012 - 2013

Young Talents in Science Program

UFES - Coordination for the Improvement of Higher Education (Capes) - Brazil
Project: Numerical Modelling Development using ADCIRC
Supervisor: Julio Tomaz Aquije Chacaltana

`matlab` `adcirc` `coastal modelling`

Feb/2014 - Jun/2015

Brazilian Scientific Mobility Program: Science without Borders

National Council for Research and Development (CNPq) - Brazil
Exchange scholarship: 6-months language course and one year of undergraduate course at UNSW

`english`

14-21 Sep 2019

Bio-Optical Oceanography Course

CEBIMar | USP - São Sebastião
Fundamentals of marine optics, tools and applied instrumentation to quantify ocean properties,
especially biological variables. Field planning, data collection, operation of instruments,
processing and interpretation of collected data.

bio-optics instrumentation data acquisition data analysis

14-19 outubro 2024

Hydrographic Survey/Data Processing Training - GPHidro

Completed training covering essential hydrographic survey systems and methodologies,
including Single Beam Echo Sounder (SBES), Multi Beam Echo Sounder (MBES), Side Scan Sonar (SSS),
and Sub-bottom Profiler (SBP). Gained practical experience in data processing for tidal, sonar,
sub-bottom, single beam, and multibeam datasets, along with key topics in kinematic positioning,
orientation, and hydrographic performance standards. Software practices include PacMare, Hypack, SonarWiz, and QPS.

bathymetry SBES MBES Data Processing

Publication, Posters & Presentations

KLUMB-OLIVEIRA & FUKAI, 2020

KLUMB-OLIVEIRA, L. A.; FUKAI, D. T.
A reanálise e sua utilização como ferramenta para o gerenciamento.
In: MUEHE, D.; LINS-DE-BARROS, F. M.; PINHEIRO, L. (orgs.) Geografia Marinha: oceanos e costas na perspectiva de geó
Rio de Janeiro: PGGM, 2020. p. 154-169. ISBN 978-65-992571-0-0
(Reanalysis as a tool for coastal management)

book chapter

FUKAI et al., 2021

FUKAI D, OAQUIM A and CIRANO M (2021).
How Might the Ocean Change in the Future?.
Front. Young Minds. 9:700622. doi: 10.3389/frym.2021.700622

paper community outreach

Certifications

- [+ certificates](#)

Additional experience

- [Research cruise PROTRINDADE/MOVAR expedition](#) - 18 - 27 Apr, 2019 | 28 Jul - 12 Aug, 2022

Python	●●●●
Data Analysis	●●●●
GitHub	●●●●
Research	●●●●