

# FRANCISCA MARON

Data officer, Integrated Marine Observing System- Animal Tracking Facility, Sydney Institute of Marine Science

## PROFILE

I am looking to apply the skills that I have acquired throughout my career in order to learn new technologies and solve interesting problems. My passion for environmental science, data analysis and visualisation is reflected in my willingness and drive to acquire new knowledge through experience, training and self-teaching. I am eager to connect people through science, and I have worked with researchers from different disciplines to achieve this. My goal is to find better ways to analyse and visualise environmental data and contribute to the conservation of biodiversity.

## CONTACT



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[www.github.com/fmaron](https://www.github.com/fmaron)

## SKILLS

R	● ● ● ● ●
Python	● ● ● ● ●
Git	● ● ● ● ●
HTML	● ● ● ● ●
CSS	● ● ● ● ●

## SOFT SKILLS

Problem-solving	● ● ● ● ●
Motivation	● ● ● ● ●
Fast-learning	● ● ● ● ●
Communication	● ● ● ● ●
Networking	● ● ● ● ●
Teamwork	● ● ● ● ●
Creative Thinking	● ● ● ● ●

## LANGUAGES

Spanish	● ● ● ● ●
English	● ● ● ● ●
Portuguese	● ● ● ● ●

## PUBLICATIONS

- López-Jara, M.J., Sacristán, I., Farías A.A., **Maron-Perez, F.**, Acuña, F., Aguilar, E., García, S., Contreras, P., Silva-Rodríguez, E.A., Napolitano, C. (2021) Free-roaming domestic cats near conservation areas in Chile: Spatial movements, human care and risks for wildlife. Perspectives in Ecology and Conservation 19, 387-398. <https://doi.org/10.1016/j.pecon.2021.02.001>.
- Vergara, P.M., **Maron-Perez, F.**, Caro, D., Soto G.E., Simonetti J.A. (2021) Area-restricted search in Magellanic Woodpeckers: importance of tree senescence, forest composition and open habitats. Journal of Ornithology 162, 677-686. <https://doi.org/10.1007/s10336-021-01878-w>

# KEY EXPERIENCE

## ● IMOS - Animal Tracking Facility, Sydney Institute of Marine Science, Data Officer

JUL 2020 - CURRENT POSITION

Data management, analytics and visualisations using R. Principal tasks:

- Responsible for managing the animal tracking database (<https://animaltracking.aodn.org.au/>). This involves communicating with researchers around Australia to gather their data and ingest it into the database and working closely with the Australian Ocean Data Network (AODN) to resolve issues with the database.
- Connecting to the Animal Tracking Database via API to harvest data for posterior analysis.
- Analysing and visualising animal tracking data in R (tidyverse for data taming, Rmarkdown for documentation and shiny, ggplot2, leaflet and plotly for visualisation).
- Tutoring Masters students in the course "R for Animal Tracking".

### Key highlights:

- Created a project management workflow to facilitate more effective reporting, transparency and collaboration within the facility.
- In collaboration with a team of researchers, we developed an R package for integrating oceanographic data and movement data of marine animals (<https://github.com/IMOS-AnimalTracking/remora>, release date mid-Nov 2021).
- Effectively liaised between users of the database and IMOS-ATF to solve data-related issues.

## ● FairSupply, Data Analyst

NOV 2020 - JUNE 2021

ESG data analysis and code development in Python. Principal tasks:

- Responsible for analysing the supply chain of multiple clients and creating ESG reports.
- Maintaining Python code for analysing data.
- Research on modern slavery in different countries.

### Key highlights:

- As part of a multidisciplinary team, we gathered information from 60 countries on modern slavery in different economic areas (e.g. agriculture, fishing, business services, etc.).
- Attended the conference "Making Global Goals Local Business" SDG 2021, Melbourne, Australia in order to learn about sustainable practices in business and as an opportunity to network.

## ● Data Science Institute UDD, Research Assistant

AUG - OCT 2018

Data analysis in Python for the project "Urban mobility and Social Welfare".

Principal tasks:

- Data cleaning of the Chilean census, extracting important variables for the project.
- Clustering people into the family unit.
- Testing statistical models to analyse the relationship between different variables with social welfare.

### Key highlights:

- I worked with a multidisciplinary team contributing to the research with programming, environmental and biological knowledge.
- Found a common selector to merge the Chilean census with electoral data, enabling access to relevant information for the models.

## OTHER EXPERIENCE

### ● University of Sydney, Demonstrator

JUL - SEP 2020

- Responsible for teaching the class "OLET1603-Analysing and Plotting Data: Python (Online)."
- Assisting students with debugging their code and guiding them to understand the issues in their code.
- Communicating with students through the discussion board in Canvas (University platform).

### ● Sydney Institute of Marine Science, Tutor

APR 2020

- Responsible for helping Masters students to analyse data in R properly.
- Troubleshooting when students had problems with the installation of the software.
- Assisting students with debugging their code and guiding them to understand the issues in their code

### ● Code Camp, Teaching Assistant

SEP 2019

- Responsible for helping 30 children between 7-12 years old to create their own 2D game using Spark.
- Keeping students engaged in the coding challenge throughout the day.
- Communicating with vastly different personalities and understanding levels in simple and consistent language to ensure the students have fun, learn and complete the challenge of the day.

### ● Universidad del Desarrollo, Tutor

JUL - DEC 2018

- Responsible for tutoring "Information Technology - Basics of Python" to Engineering bachelor students.
- Preparing exercises for students to relate Python with real-life problems and working through these exercises with the students.
- Assisting students with challenges they had with the course, both in class and during my consultation hours
- Marking quizzes and assignments with the headteacher.

# EDUCATION

- **University of Adelaide**  
JUL 2021 - CURRENTLY STUDYING  
**Masters in Data Science (Applied)**  
Part-time degree (20 hours per week)
- **University of Sydney**  
FEB 2019 - JUL 2020  
**Masters in Marine Science and Management.**  
My thesis was about the vertical movements of reef manta rays.  
Principal tasks:
  - Extracting important variables for the project from a variety of databases.
  - Data cleaning of existing datasets using R.
  - Creating a new dataset of environmental variables obtained from different resources.
  - Using Generalising Additive Mixed Models to test the hypothesis.

- **Universidad de Chile**  
MAR 2013 - NOV 2018  
**Bachelor in Environmental Science, majoring in Biology.**  
My thesis was about the movement of the Magellanic woodpecker.  
Principal tasks:
  - Extracting important variables for the project.
  - Data cleaning of existing datasets using Python.
  - Hypothesis testing using Linear Mixed Models in R.

- **Universidad del Desarrollo**  
AUG 2017 - DEC 2017  
**Data Science Diploma** (104 class hours)  
Courses:
  - Data Science
  - Data Analysis
  - Machine Learning
  - Big Data
  - Information Visualisation

## REFERENCES\*

\*References upon request