# MARIANA CHAVES

## Data scientist and statistician

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m-chaves.github.io

m-chaves

Nice, France

Costa Rica 1995

# **ABOUT ME**

I am a research engineer at CNRS and a member of the WIMMICS team at Inria, where I work on natural language processing (NLP) and argument mining applied to the context of political debates, press articles, and social media. In my 7 years of working experience, I have developed diverse projects involving statistics, data science, machine learning, and artificial intelligence. This includes applications in social media analysis, gender representation in media, explainable AI, supply chain logistics, and money laundering detection.

# **WORK EXPERIENCE**

# Research Engineer

## **CNRS and Inria. France**

**2**023 - Present

Research in natural language processing (NLP) focused on fallacy detection and classification via argumentation, especially in the context of political debates and social media. Currently analysing press coverage of the war in Ukraine.

# Research internship

#### 13S and Inria, France

**=** 2022

Research on prototype-based interpretable neural networks, text classification models, and NLP techniques applied to the understanding of gender representation in visual media.

#### Research internship

### Université Côte d'Azur and Inria, France

**=** 202

Research on model agnostic interpretability methods in the ambit of images. More specifically, improving resampling process for local interpretable model-agnostic explanations (LIME).

## Data scientist

# Walmart Supply Chain Analytics USA, Costa Rica

**2017 - 2020** 

Directed and developed data analysis projects. The main initiatives included anomaly detection systems, statistical sampling design, statistical process control techniques, and KPI development.

## Data analyst

#### **BAC Credomatic, Costa Rica**

**2016** 

Developed a money laundering detection system based on bayesian decision trees models applied on banking transactional data.

# **LANGUAGES**

Spanish - C2 (Native) English - C1 (TOEFL iBT) Portuguese - B2/C1 French - B2



# **EDUCATION**

MSc Data science and artificial intelligence

#### Université Côte d'Azur (UniCA), France

**2020 - 2022** 

A Honors Graduate (Mention Très Bien).

## **Bachelor in Statistics**

## University of Costa Rica (UCR), Costa Rica

**2013 - 2017** 

**Q** Honors Graduate.

# **PUBLICATIONS**

Mariana Chaves, Elena Cabrio, Serena Villata. FALCON: A multi-label graph-based dataset for fallacy classification in the COVID-19 infodemic. SAC 2025. hal-04834405

Pierpaolo Goffredo, Mariana Chaves, Serena Villata, and Elena Cabrio. Argument-based Detection and Classification of Fallacies in Political Debates. EMNLP 2023. hal-04260221

# **HONOURABLE MENTIONS**

Highest GPA among Statistics majors for three consecutive years: 2013, 2014, 2015.

University of Costa Rica (UCR)

Honorable Mention: 9th place (out of ≈33k) on National Admission Exam.
University of Costa Rica (UCR) 2012-2013

Honorable Mention: 1st place (out of ≈20k) on National Admission Exam.
Technological Institute of Costa Rica
(TEC) 2012-2013

## **MAIN SKILLS**

Python







