# Ketsia **Guichard**

## PHD CANDIDATE IN STATISTICS

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## **Pro**file & Research Project

Currently a PhD Student in Applied Statistics, I have six years of experience as a Data Scientist. My professional journey has allowed me to develop expertise in handling real-world data and strong skills in knowledge dissemination. Following a teaching experience at an engineering school, my doctoral studies mark a new milestone, driven by my interest in ethical issues.

My research focuses on the partitioning of structured data, particularly attributed graphs. This project is motivated by the problem of partitioning road networks, stemming from research in transportation and mobility. Applications are conducted on real-world data from a citizen science project, thus aiming to better understand mobility in low-density areas.

## **Edu**cation

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| **University of Rennes - IRMAR** | *Rennes* |
| PHD CANDIDATE IN APPLIED STATISTICS | *Since October 2023* |

*Interdisciplinary statistical analysis of mobility patterns to understand needs and support transitions*,
under the supervision of Loïc Le Marrec, Véronique Thelen and Ioana Gavra

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| **ENSAI - National Engineering School of Statistics and Information Analysis** | *Rennes* |
| MASTER'S DEGREE | *2012 - 2015* |

- Specialized in Quantitative Marketing

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| **Lycée Michel de Montaigne** | *Bordeaux* |
| LITERARY AND SCIENTIFIC PREPARATORY CLASS FOR FRENCH GRANDES ÉCOLES (B/L) | *2010 - 2012* |

Program combining economics, social sciences, humanities, and mathematics, fostering problem-solving skills and interdisciplinary

## **Res**earch

### CONFERENCE TALKS

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| FRANCOPHONE MEETINGS ON TRANSPORT AND MOBILITY | *Bruxelles (BE) - June 2024* |

Mobility in Medium-Density Areas : A Spatio-Temporal Exploration of Citizen Science Data

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| R MEETINGS | *Vannes (FR) - June 2024* |

telraamStats package : Mobility Patterns Visualization for Researchers and Citizens

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| YOUNG STATISTICIANS MEETINGS | *Porquerolles (FR) - April 2024* |

Exploration of Citizen Mobility Data : Case Study of the City of Châteaubourg

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|---|---:|
| RENNES DOCTORAL RESEARCH DAY IN STATISTICS | *Rennes - March 2024* |

Exploration of Citizen Mobility Data through Functional Data Analysis

### SOFTWARE DEVELOPMENT

I am a contributor to the R package *telraamStats*, available directly on CRAN. This package allows easy retrieval of mobility sensor data from Telraam without using the API, as well as visualizing mobility information (speed, traffic, etc.). This general-purpose package is designed for a wide range of audiences, including various academic disciplines (statistics, mobility, economics, geography, etc.) as well as different professional profiles (research, associations, municipalities).

### OTHER SCIENTIFIC ACTIVITIES

— Scientific Council of the Henri Lebesgue Center
— Co-organization of the IRMAR Doctoral Students' Statistics Seminar
— Co-organization of the Rennes Doctoral Students' Day in Statistics (March 2024)
— Scientific committee of the event "Equality and Science : The Role of Women" (March 2024)

# Teaching

**University of Rennes** *Rennes*
Adjunct Lecturer *Since September 2023*
- Computing Tools (Algorithms) for Mathematics and Applications Studies - First Year (24 hours)

**ENSAI - National Engineering School of Statistics and Information Analysis** *Rennes*
Adjunct Lecturer *Since April 2022*
- Lecture - Probability and Statistics (22 hours) - Master's Level (M1)
- Lecture - Exploratory Statistics, Data Visualization, and Data Storytelling (24 hours) - Postgraduate Level (Bac+6)
- Teaching Assistant - Descriptive Statistics with SAS (30 hours) - Undergraduate Level (L3)
- Teaching Assistant - Introduction to Object-Oriented Programming and Code Documentation (42 hours) - Undergraduate Level (L3)
- Teaching Assistant - Markov Chains (18 hours) - Master's Level (M1)
- Project Supervision - Statistical Project with Real-World Data (36 hours - 8 groups) - Undergraduate Level (L3)
- Jury President - Second-Year Statistical Project - Master's Level (M1)
- Vice-Jury President - Final-Year Thesis Defense - Master's Level (M2)

**Rennes 2 University** *Rennes*
Adjunct Lecturer *2023-2024*
- Integrated Seminar - Mathematics for Social and Economic Administration Studies First year (24 hours)

# Work Experience

**Leboncoin** *Paris*
Fraud and Moderation Data Scientist *2019 - 2021*
- Automatic detecting various account fraud cases (compromise, fake accounts) – supervised classification
- Recommendation of similar ads – ElasticSearch
- Detecting search trends – Prophet, FastText
- Other topics : exploratory analyses, churn scoring
- Member of the Women in Tech committee : raising awareness about tech careers for young audiences, meetups

**Louis Vuitton** *Paris*
Lead Data Scientist *May 2018 - December 2018*
- Developing of purchase prediction scores – supervised classification and scoring methods
- Coordinating and implementing agile processes within a team of three contractor Data Scientists

**Meetic** *Paris*
Consumer Journey Data Scientist *2016 - 2018*
- Designing and updating of matching algorithms
- Analyzing A/B tests for user experience and new features

**Jobijoba** *Bordeaux*
Data Scientist *2015 - 2016*
- Automatic profiling of visitors based on to their navigation on the website to enhance recommendation systems
- Constructing dashboards using RShiny

# Other activities

Fresque du sexisme *Janvier 2023 - en cours*
I am a facilitator for the Fresque du Sexisme. This is a 3-hour collective intelligence workshop aimed at deconstructing the mechanisms of sexism and envisioning a more equal society. Inspired by the format of the Climate Fresk, this workshop was created by the Fresque du Sexisme association and is currently being implemented throughout France.

# Langues

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| **French** | Native | |
| **English** | Working knowledge | *TOEIC : 870/990 - B2 Level* |
| **German** | Intermediate | *WIDAF : 916/990 - C1 Level* |

# Technical Skills

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| **Languages & Frameworks** | Python, R et R Shiny, Spark, Tensorflow, Keras |
| **Databases** | SQL, NoSQL, MongoDB, BigQuery, AWS (Redshift, Athena) |