

# Francesca Collu

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## Experience

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### FlyWithWine, **Marketing Data Analyst**

Sep 2023-Aug 2024

- Conducted extensive **web scraping** to gather valuable information, ensuring compliance with legal standards.
- Employed **data cleaning** techniques, such as deduplication, to enhance data quality and accuracy.
- Created and maintained an **interactive online dashboard** using Plotly, providing real-time insights into wholesale orders.
- Oversaw and executed **marketing campaigns** utilizing Apollo.io, optimizing strategies to reach target audiences effectively.
- Led the development of a **web app** to allow end users to customize the product before purchase

### King Company, **Data Analyst**

Apr 2023-Aug 2023

- Coded and updated healthcare data flow application using **SAS language**.

### SocialCom Italia, **Data Scientist**

Jun 2022-Sep 2022

- Contributed to a team of political data analysts and communication experts in the 2022 campaign of the **Italian Democratic Party** (PD) as the technical member, utilizing **Python** and advanced Natural Language Processing (**NLP**) techniques such as **sentiment analysis** and **topic modeling** to analyze data from over 2,000 Facebook groups.
- Designed and implemented an online dashboard using **AWS services** (Lambda, ECR and Athena) to provide real-time access to NLP analysis results for clients, including political parties and journalists, enabling them to make more informed decisions during the campaign.

### National Research Council - University of Rome, **Data Scientist**

Jun 2021-Jan 2022

- Conducted an in-depth analysis of the voting behavior of the members of the Italian Parliament during the 18th legislature by retrieving over **4 million records** of votes using **URL requests** and **web scraping** on Parliament websites, utilizing **Python**.
- Built visual representations of the data using graph theory and **network analysis**, studying centrality measures and community structures through modularity optimization.
- Applied natural language processing (**NLP**) techniques to study the distribution of **topics** for approximately 8,000 bills in the Italian Parliament, by clustering the bills and identifying patterns in the data.

### Avanade, Software Analyst

Jun 2020-Sep 2021

- Ensured the database was running smoothly and troubleshooted any issues (SQL Server and C#)

## Education

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### Sapienza, University of Rome

- Postgraduate certificate in **Data Science** with the thesis *Voting and Co-Voting in the Italian Parliament: a Network Analysis*.
- Final marks: 110/110 cum Laude.
- Selected Coursework: Unsupervised Classification, Neural Networks, Network Analysis, Georeferencing, Text Mining.

### University of Pisa

- M.Sc. **Theoretical Physics** with the thesis *Nonequilibrium Steady-State Analysis of a Boundary-Driven Quantum Spin Chain*.
- Final marks: 109/110.

### University of Cagliari

- B.Sc. **Physics** with the thesis *Path Integrals in Non-Relativistic Quantum Mechanics*.
- Final marks: 105/110

## Technologies

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- Sci-kit Learn, Pandas, Numpy, Matplotlib, Plotly, Seaborn, Spacy, Nltk, Beautiful Soup, Selenium (Python)
- SQL, AWS, GitHub, DVC (Data Version Control), Informatica PowerCenter, Tableau, SAS, ReactJS

## Volunteering

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- JL Project (Mediterranea Saving Humans) | 2023-ongoing: provide support to asylum seekers in Italy, conducting interviews with refugees.
- Emergency | 2016-2017: organized events for fundraising activities.
- Azione Cattolica | 1997-2006: engaged in children's activities, clothing drives for the underprivileged, organization of events.