

Barbara Carboni

Education

University of Cagliari

2020

MSc - Data Science Business Analytics e Innovation (LM/91)

Magna cum laude

- Final Dissertation: Quantum Machine Learning, general fundamentals, computational aspects and software libraries.
- Disciplinary area: Statistics and Machine Learning
- Supervisor: Francesco Mola, Full Professor of Statistics

University of Cagliari

2018

BSc - Mathematics (L/32)

- Final Dissertation: Number theory and security in blockchain
- Disciplinary area: Computer Science
- Supervisor: Roberto Tonelli, Professor of Computer Science

Technical skills

- Python (Data Science Oriented)
- R (basic)
- Mathematics and Statistics
- Machine Learning
- Web Scraping
- Natural Language Processing
- Data visualization
- Economics Science (ICT models, marketing, management)

Language

Italian:

Native Language

English:

Intermediary proficiency

2018

Certificate B2 issued by the linguistics department of Cagliari University

French:

Intermediary proficiency

Research experience

University of Cagliari, department of Economic and Business Sciences - CREA

Research Fellow 02BR/2021: "Data science for technology transfer activities".

March 2021 - to date

EU-SME patent project:

- Pandas for manage dataset
- Scikit-learn for preprocessing a machine learning models
- Numpy for mathematical operations
- Matplotlib and seaborn for data visualization
- CatBoost for classification model
- Scikit-uptift for uplift model

Entrepreneurship CLAB project:

- Pandas for manage dataset
 - Scikit-learn for preprocessing
 - Numpy for mathematical operations
 - Matplotlib and seaborn for visualisation
 - Factor-analyzer for confermative and explorative factor analysis
 - PLS-SAM tool for partial least square analysis
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Work experience

FREELANCE COLLABORATION: 'ANDREA CHIESA LEGNAMI SRL'

January 2021- to date

Development of a web app aimed at optimising supply chain management and creation of a relational database using Python, Django and SQLite3.

FREELANCE COLLABORATION: 'TICKETSMS SRL'

November - December 2020

Data extraction from various websites, creation and cleaning of databases for commercial purposes using a web tool (Web Scraper Io) and Python (main libraries used: pandas, selenium).

FREELANCE COLLABORATION: 'YOUR DATA SRL'

April 2019

Hearten' project: data processing using R software

TUTOR REMEDIAL AND SUPPLEMENTARY ACTIVITIES

A.A. 2019-2020

University of Cagliari, Faculty of Economic Sciences, bachelor program in Economics and Finance

- remedial math classroom lessons (10 hours)
- annual report of the course
- digital communications and administration of the course

TEACHING ASSISTANT

A.A. 2018-2019

University of Cagliari, Faculty of Biology and Pharmacy, Bachelor program in Biology, course Mathematics and Statistics

- classroom lessons (40 hours)

'ANDREA CHIESA LEGNAMI SRL'

2014-2017

Analysis and management of sales/purchase and customer data

Research University Projects

Main libraries used

pandas, scikit-learn, nltk, matplotlib and seaborn

Dyson Patent Analysis

The study is divided into two parts: one part aims to provide a general overview of society by examining patent activity by year, by area and by patent classes and sections, while the other part will focus on a few particularly interesting topics. Where possible, patents have been clustered into years (before and after 2009) so that a comparison can be made between past and present and to try to understand the direction in which society is moving.

Game of Thrones Analysis

Analysis of the reviews of the TV series to understand how these have varied from season to season and of the reviews of the books

Evolution of the characters: through the analysis of the scripts, and some chapters concerning the main characters. Extraction and analysis of all tweets related to the airing period of all eight seasons of the television series.

- BeautifulSoup, urllib, request, selenium, webdriver manager, wordcloud rake and pyLDAvis

Game of Thrones Network Analysis

Evolution of the social network in the 8 seasons of the TV series built through the interactions between the characters. Analysis carried out:

importance of nodes, clustering, positive and negative relationships, game theory, power positions, matching markets.

- plotly, networkx, fa2