Luca Ferrari

ferrari.luca.cs@gmail.com | *https://ferrariluca.net* | *https://www.linkedin.com/in/luca-ferrari-75333b1b3/* | *https://github.com/frittatelle*

Data Science and Computer Engineering student with proven ability to combine vision, technical knowledge and data-savviness through multiple projects and academic education.

Skills and areas of expertise

Programming languages	**Big Data**	**Cloud Computing**	**System Administration**	**Web Development**	**Data Science / ML**	**Other**
• Python • Java • C • SQL • MATLAB	• PySpark • Spark • Hadoop • Hive	• AWS • GCP • OpenStack • Azure	• Linux • Ubuntu • CentOS • Nginx • Apache	• HTML • CSS • JavaScript • React • JSP • MySQL • PHP	• NumPy • Pandas • SciKit Learn • MongoDB • TensorFlow • Matplotlib • SeaBorn	• Project Management • Git • Wireshark • Jupyter • Adobe Suite • Office package

Projects

For extra projects and further information: https://ferrariluca.net/projects

- **Twitter sentiment and text analysis with stock market prediction applications during COVID-19 pandemic**

  Analysis: *https://ferrariluca.net/docs/twitterSentimentAnalysis.pdf*
  Python, Hadoop, Hive, MongoDB, Spark, PySpark, OpenStack

  The objective of the project was to analyze Twitter data produced during the pandemic time to get useful insights. In particular one of the main goals was trying to predict stock market features of companies that experienced some major changes during the pandemic (Zoom, Tripadvisor) using sentiment analysis time series.
  As a result, it was possible to observe a non-linear relationship between sentiment time series and companies' stock market features and complex modelling was needed to exploit the predictive information from data. (The project covered the entire data pipeline).

  - Data sources research
  - Data architecture design and setup
  - Data exploration
  - Data pre-processing
  - Hypothesis formulation
  - Hypothesis testing and verification
  - Results presentation

- **backCor (Raman spectra pre-processing tool)**

  Code: *https://github.com/frittatelle/backCor*
  Python, Python OOP, Tkinter, NumPy, Matplotlib, PyInstaller, Project Management

  backCor is a Raman spectra pre-processing software I developed in collaboration with the Nanomedicine and Molecular Imaging lab of IRCCS ICS Maugeri and the CCPS lab of the University of Pavia.
  After being processed Raman spectra data is used to classify mammal microcalcification and therefore to detect breast tumor.

  - Software design
  - Software development

- **COVID-19 Hackathon**

  Analysis: *https://ferrariluca.net/docs/hackathon*
  Hackathon rules: *http://antoninonocera.unipv.it/2020/04/01/dsbda-2020-hackathon-covid19/*
  Python, Numpy, Pandas, SciKit-Learn, Matplotlib, Seaborn

  The objective of the project/hackathon was to investigate COVID-19 data providing meaningful insights and trends. In my analysis I tried to assess the effectiveness of the Italian Governement containement measures. The analysis was positively evaluated by the jury and got me the 2nd place in the COVID-19 Hackathon by University of Pavia.

  - Data sources research
  - Data exploration
  - Data pre-processing
  - Hypothesis formulation
  - Hypothesis testing and verification
  - Results presentation

- **Complex Networks analysis**

  Analysis: *https://ferrariluca.net/docs/edi.pdf*
  Nginx, AWS, HTTP/2, Ubuntu Server, Proxy Servers, Apache, CentOS, DDoS

  Server architectures / technologies performance and robustness testing.

  - Servers setup on AWS
  - Ubuntu / CentOS setup
  - HTTP/2 setup
  - Reverse proxy setup
  - Performance testing
  - Robustness testing (DDoS attack simulation)

- **ferrariluca.net**

  AWS, Ubuntu Server, Nginx, HTML, CSS, JavaScript, PHP, MySQL, Project Management, Adobe Suite

  Personal website development and setup.

  - Website design
  - Website development

    - Server setup on AWS (*now hosted on github pages*)
    - Website deployment

Education

- **Master's degree, Computer Engineering, Data Science**

  Università degli Studi di Pavia, Italy
  2019 - 2021
- **Bachelor's degree, Bioingegneria e ingegneria biomedica**

  Università degli Studi di Pavia, Italy
  2016 - 2019
- **Maturità scientifica**

  Liceo Scientifico T.Taramelli, Pavia, Italy
  2011 - 2016

Languages

- **Italian**, Mother tongue
- **English**, Fluent
- **French**, Basic
- **Swedish**, Beginner