

# Tommaso Mario Buonocore

## Biomedical Engineer

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### Summary

Biomedical Engineer and AI enthusiast, currently researching NLP solutions to improve healthcare-based prediction tasks leveraging Italian clinical notes.  
Geek, musician, bicycle lover. I embrace social and environmental sustainability to support more fair, responsible and ethical relations with the planet and its humans.

### Work experience

Software Engineer & NLP Consultant 02/2021 - today  
[Biomeris S.r.l. - Pavia \(IT\)](#)  
Working on Shiny R web application for OMOP data visualization.  
Helping with NLP-related activities.

PhD Student - Big Data and Biomedical Informatics 10/2020 - today  
[University of Pavia & ICS Maugeri - Pavia \(IT\)](#)  
Currently researching NLP techniques to improve patient representation learning and classification with Italian biomedical language models.  
Teacher of the Advanced Machine Learning course (NLP section) for Master's students.  
Collaborating with ICS Maugeri, ICCU Monzino, and other medical institutes.

Machine Learning Engineer 07/2019 - 04/2020  
[Academisch Medisch Centrum - Amsterdam \(NL\)](#)  
Worked on fall prevention in elderly patients, implementing a support system based on discrete Bayesian networks.  
Researched Natural Language Processing methods (word embeddings, language models) applied to free-text clinical notes.

Software Engineer (Internship) 05/2019 - 07/2019  
[Biomeris S.r.l. - Pavia \(IT\)](#)  
Worked on software modules for Diagnostic Therapeutic Care Pathway management for Multiple Sclerosis.

Machine Learning Engineer (Internship) 10/2018 - 03/2019  
[Academisch Medisch Centrum - Amsterdam \(NL\)](#)  
Researched NLP models for the early detection of colorectal cancer leveraging EHR unstructured data.

Software Engineer (Internship) 04/2016 - 09/2016  
[Biomeris S.r.l. - Pavia \(IT\)](#)  
Worked on a JavaScript library for genograms' representation and visualization.

### Education

Master's Degree in Biomedical Engineering 09/2016 - 07/2019  
110/110 Cum Laude - University of Pavia  
Courses: Advanced Biomedical Machine Learning (30/30), Medical Informatics (30L/30), Data Mining and Clinical Decision Support (30/30), Telemedicine (29/30), Information Security (30/30), Biomathematics (28/30), Artificial Intelligence in Medicine (28/30).

Bachelor's Degree in Biomedical Engineering 09/2012 - 04/2016  
100/110 - University of Pavia

Music Studies 2004 - 2010  
[Higher Institute of Music Studies F. Vittadini, Pavia](#)

### Volunteer Experience

Collaborator & Content Creator 2021 - today  
[ComIntArt](#)  
ComIntArt is an Italian group that follows the 'popular science' approach to provide Artificial Intelligence contents to the general audience.

Technical Writer 2019 - today  
[Towards Data Science](#)  
Writing about Data Science, Machine Learning, Artificial Intelligence and Programming for one of the most popular data science blogs in the world.  
Contributions: <https://medium.com/@detsutut>

Translator 2019 - 2020  
[Coursera](#)  
Helping making up for the lack of AI-related content for non-english speakers.

### Soft Skills

Patience - Critical Thinking - Perseverance  
Curiosity - Visual Communication - Creativity  
Public Speaking - Self Monitoring -  
Negotiation Team Working - Flexibility -  
Positive Attitude

### Technical Skills

Machine Learning - Deep Learning - R - Shiny  
R Data Mining - Data Visualization - Python -  
SQL Medical Informatics - HTML - CSS -  
Javascript Java - Natural Language Processing  
- Matlab Medical Information Systems -  
Healthcare

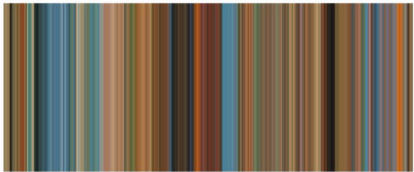
### Portfolio

Projects I developed and maintained involving  
Data Science, Programming and Analytics.  
Source codes are available on [GitHub](#).



Sinapsi

Web application designed to provide an easy  
connection between Italian family doctors and  
psychologists.



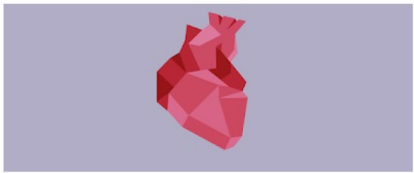
ChromaR

Data viz R package for analyzing and exploring  
colors and chromatic storytelling in any local  
video source.



ShinyDBNet

Shiny R Web Application designed for Discrete  
Bayesian Networks handling and reasoning.



MOGES

Cross-platform Mobile Application to classify  
cardiomyopathies according to MOGE(S)  
nosology system.

### Certifications

Professional License - Information Engineer  
State exam for certification: 06/2021

### Languages

Italian  
Native speaker  
  
English  
Business fluent