

# 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

PhD Student - Big Data and Biomedical Informatics 10/2020 - today

[University of Pavia - Pavia \(IT\)](#)

*Currently researching NLP techniques to improve patient representation learning and classification with italian biomedical language models.*

Machine Learning Engineer 07/2019 - 04/2020

[Academisch Medisch Centrum - Amsterdam \(NL\)](#)

*Worked on falls 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

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 - today

[Coursera](#)

*Helping making up for the lack of AI-related content for non-english speakers.*

### Soft Skills

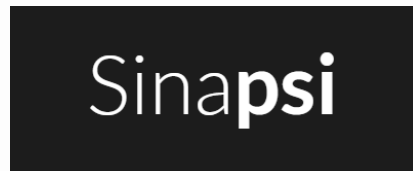
Patience - Critical Thinking - Perseverance  
Curiosity - Visual Communication - Creativity  
Public Speaking - Self Monitoring - Negotiation  
Team Working - Flexibility - Positive Attitude

### 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.*