




# RUGGERO G. BETTINARDI, PhD


Data Science // R&D Manager

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## PROFESSIONAL SUMMARY

Neuroscientist with 10+ years experience working on Data Science R&D projects both in academia and in industry, specialized in the development and validation of biomarkers-based medical algorithms. I have a proven track record in planning, executing and leading innovative projects blending state-of-the-art data analysis, AI and neuroscience to foster advances in healthcare.

## EDUCATION

2012 - 2016

### Doctor of Philosophy (PhD)

Pompeu Fabra University / Spain, Barcelona

**Computational Neuroscience** | Cum Laude

2009 - 2011

### Master of Science (MS)

San Raffaele University / Italy, Milan

**Cognitive Neuroscience** | Cum Laude

## SKILLS

- R&D Management **Experienced**
- Data Analysis **Experienced**
- Machine Learning **Experienced**
- Deep Learning **Experienced**
- Research **Experienced**
- Statistics **Experienced**
- Signal Processing **Experienced**
- Neuroscience **Experienced**
- Mentoring **Experienced**
- Python **Experienced**
- PyCharm **Experienced**
- Git Versioning **Experienced**
- Keras, TensorFlow, Sklearn **Experienced**
- MLflow, Coiled.io **Experienced**
- AWS: S3, SageMaker **Skillful**
- Docker **Skillful**
- NLP **Beginner**

## EXPERIENCE

2019 - Now

### Senior Data Scientist

#### BioSerenity / France, Paris

MedTech -- Developed, tested and deployed feature extraction pipelines, biomarkers detection algorithms and AI models for healthcare applications. Organize and manage collection of medical annotated data to train/test machine learning models. Algorithms documentation for FDA clearance and CE marking. Exploratory analysis of large-scale medical datasets. Supervise and mentor junior data scientists.

2019 - 2019

### R&D Manager

#### Muvraline / France, Paris

AI Startup -- Collaborate in defining the company's R&D strategy by proposing, organizing and leading AI projects to develop. Design and lead the successful development of two AI prototypes to perform automated facial and speech emotion recognition. Lead interns on applied AI projects.

2018 - 2019

### Data Science Postdoc

#### Ecole Normale Supérieure / France, Paris

Research Lab -- Analysis and interpretation of in vivo whole-brain neural dynamics of zebrafish larvae.

2016 - 2017

### Data Science Postdoc / Supervisor

#### Centre for Genomic Regulation / Spain, Barcelona

Research Lab -- Statistical analysis of electrophysiological and behavioral data. Supervision of a PhD student.

## LANGUAGES

- Italian Native
- English Professional Proficiency
- Spanish Professional Proficiency
- French Professional Proficiency

## COURSES

2022

### Team Management

BENE Formation

2021

### Machine Learning Scientist Track

Datacamp

2019

### Machine Learning A-Z

Udemy

2015

### Advanced Statistics - Summer School

Universidad Politecnica de Madrid

## AWARDS

- FI Pre-Doctoral Scholarship
- LLP / Erasmus Placement
- LLP / Erasmus Program

## PERSONAL INFO

- Date of birth: 17 February 1986
- Nationality: Italian

## PUBLICATIONS

### Bettinardi et al. 2017

"How structure sculpts function: unveiling the contribution of anatomical connectivity to the brain correlation structure" - Chaos: an Interdisciplinary Journal of Nonlinear Science (In the top 10 of the most downloaded paper published in 2017 in the journal). DOI: 10.1063/1.4980099. **Cited 60+ times.**

### Pannunzi, Hindriks, Bettinardi et al. 2017

"Resting-state fMRI correlations: from link-wise unreliability to whole brain stability" - NeuroImage - DOI: 10.1016/j.neuroimage.2017.06.006. **Cited 90+ times.**


### Bettinardi et al. 2015

"Gradual emergence of spontaneous correlated brain activity during fading of general anesthesia in rats: Evidences from fMRI and local field potentials" - NeuroImage - DOI 10.1016/j.neuroimage.2015.03.037. **Cited 70+ times.**

## ACADEMIC / EXTRA PROJECTS


2023 - 2023

### GPT - Research Paper Summarizer

- Built a GPT4 tool to automatically summarize research articles. 




2021 - 2021

### Human Activity Classification From Wrist Accelerometer

- Supervised classification using public database. 



2020 - 2021

### Data Science @ Radio Lockdown

- Tracking of audience listening to each podcast of a friend's webradio. 
- Speech vs. Song segmentation of each podcast. 
- Speech recognition + topic world cloud visualization of each podcast. 



2015 - 2016

### How Structure Sculpt Function in Networks

- Simulate how different topologies affects correlation. 
- Derive novel measure to predict correlation from structure. 


2015 - 2015

### Variability of Brain Networks

- Analysis of variability of brain structural and functional networks.  

2014 - 2014

### PoC: Topology of Delay & Network Synchronization

- Simulate how information transfer delay affects synchronization. 

2011 - 2014

### How Anesthesia Modulates Brain Networks

- Analyzed changes in brain networks in Deep vs. Light Anesthesia. 