Valerio **Gherardi**

Data Scientist

Valencia, España

+34 681 904 907 | vgherard840@gmail.com | vgherard.github.io | vgherard | vgherard | ValerioGherardi

Theoretical Physicist | Data Scientist

Description

I am a tireless student. My scientific background provides me with a strong analytic mindset, that I enjoy applying to problems and challenges coming from diverse areas. This is partly why, after completing my PhD in Particle Physics, I decided to steer myself in a new direction, and to pursue a career in Data Science - considering that this represented a great opportunity to keep doing what I like and do best, in a dynamic environment that fueled my curiosity.

I am currently employed as Data Scientist in the Product Analytics division of Voicemod, a software development company whose main focus are voice changing technologies. Here, my main tasks involve experimental design and coordination of A/B tests, analysis of complex user behavioral data, inference and predictive modeling around product decisions. In addition to that, a conspicuous part of my job involves providing support for data-engineering and reporting needs, especially on the data-modeling front.

What motivates me most in my day-to-day work is to bring data-driven business advice to my colleagues, and to enable teams to *measure* the impact of their efforts. On the personal side, I love getting the chance to learn some new trick every day.

Work Experience

Data Scientist — *Valencia, Spain*

Voicemod — *2021-Current*

Education

PhD in Theoretical Particle Physics — *Trieste, Italy*

International School for Advanced Studies (SISSA) — *2017-2021*

- Awarded with honourable mention.

Laurea Magistrale in Fisica — *Rome, Italy*

Università La Sapienza — *2015-2017*

- Final Grade: 110/110 cum laude

Laurea Triennale in Fisica — *Rome, Italy*

Università La Sapienza — *2012-15*

- Final Grade: 110/110 cum laude

Technical Skills and Tool Stack

Scientific skills. Experimental Design / Statistical Modeling / Algorithmic Coding / Scientific Communication

Programming languages. R / Python / Bash / C++ / Wolfram / FORTRAN

Database/Warehouse. Snowflake / Redshift / BigQuery / SQLite / PostgreSQL

Reporting and Visualization. Tableau / Looker / Amplitude / RMarkdown / Shiny / Plotly / Streamlit

Data Modeling and Engineering. DBT / Airflow

Data Platforms. mParticle / split.io / Iterable

Cloud Computing. Google Cloud Platform / AWS

Deep Learning. Keras / Tensorflow

Misc. Git / Docker

Language Skills

Italian Mother tongue | **English** Professional | **Spanish** Professional

Personal Projects

Below are some fun-projects I have worked on - mostly focused on Statistics/Machine-Learning and developed in the R programming language.

`kgrams` (vgherard.github.io/kgrams/)

Tools for training and evaluating k-gram language models, R package with C++ backend.

`fcci` (vgherard.github.io/fcci/)

Support for Feldman-Cousins Confidence Intervals; R/C++ implementation.

`r2r` (vgherard.github.io/r2r/)

Implementation of hash tables in the R programming language.

Certifications

Data Structures and Algorithms Specialization *Coursera.org*

UNIVERSITY OF CALIFORNIA SAN DIEGO *2021*

- Course description and certificate: https://coursera.org/share/4fe6c2e914585cb813c93488d20d8f52

Natural Language Processing Specialization *Coursera.org*

DEEPLEARNING.AI *2021*

- Course description and certificate: https://coursera.org/share/903e270df65d75737d6c884743509e84

Deep Learning Specialization *Coursera.org*

DEEPLEARNING.AI *2020*

- Course description and certificate: https://coursera.org/share/1a79776ec145f7d140c93b95281f5250

Data Science Specialization *Coursera.org*

JOHNS HOPKINS UNIVERSITY *2020*

- Course description and certificate: https://coursera.org/share/3d64e7b0e1038f16fdb2103a71878e53

Scientific Publications

1. Feruglio, F., Gherardi, V., Romanino, A., & Titov, A. (2021). Modular invariant dynamics and fermion mass hierarchies around $\tau = i$. *JHEP*, *05*, 242. https://doi.org/10.1007/JHEP05(2021)242
2. Gherardi, V., Marzocca, D., & Venturini, E. (2021). Low-energy phenomenology of scalar leptoquarks at one-loop accuracy. *JHEP*, *01*, 138. https://doi.org/10.1007/JHEP01(2021)138
3. Gherardi, V., Marzocca, D., & Venturini, E. (2020). Matching scalar leptoquarks to the SMEFT at one loop. *JHEP*, *07*, 225. https://doi.org/10.1007/JHEP07(2020)225
4. Gherardi, V. (2020). General correlations to $b \to s\ell^+\ell^-$ anomalies from a rank condition. *Nuovo Cim. C*, *43*(2-3), 45. https://doi.org/10.1393/ncc/i2020-20045-0
5. Alvarenga Nogueira, J. H., Colasante, D., Gherardi, V., Frederico, T., Pace, E., & Salmè, G. (2019). Solving the Bethe-Salpeter Equation in Minkowski Space for a Fermion-Scalar system. *Phys. Rev. D*, *100*(1), 016021. https://doi.org/10.1103/PhysRevD.100.016021
6. Gherardi, V., Marzocca, D., Nardecchia, M., & Romanino, A. (2019). Rank-One Flavor Violation and B-meson anomalies. *JHEP*, *10*, 112. https://doi.org/10.1007/JHEP10(2019)112

Awards

***"Admeto Pettinari e Paolo Andreini" Scholarship* (01/10/2019)**

Awarded by *Cassa di Sovvenzione e Risparmio per i dipendenti della Banca d'Italia*