Francesco Sacco

Nationality: Italian
Date of birth: 15/12/1997

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About me:

I'm a highly curious, problem solving-oriented physics graduate, interested in machine learning, statistical physics and bioinformatics

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Skills:
Physics
Math
Machine Learning
Statistics

Soft Skills:
Creativity
Critical thinking
Problem solving
Teamwork

Digital Skills:

Python	★★★★★
Git	★★★★★
Pytorch	★★★★★
C	★★★★
Javascript	★★★
Pandas	★★★
HTML/CSS	★★★
Docker	★★

Languages:

Italian	Native
English	Fluent
Spanish	Limited

Job Experience:

Junior Researcher
January 2023 - ongoing
Levin lab, Tufts University, Boston MA

Research on self-organizing systems applying machine learning methods to biological systems and natural language processing.

Research:

Adversarial Takeover of Neural Cellular Automata
JULY 2022, Alife conference, doi.org/10.1162/isal_a_00521
Authors: L. Cavuoti, F. Sacco, E. Randazzo, M. Levin

Published machine learning paper about computer vision and biological systems in collaboration with Allen discovery center and Google researchers. Our work was presented at the Artificial Life conference.

https://letteraunica.github.io/neural_cellular_automata/

Projects:

Quantum computing development
JULY 2021, Europe Qiskit Hackathon 2021 - IBM

Quantum computing program aimed to make a quantum version of the Hamming and Reed-Solomon error correction codes.

https://github.com/Dirac231/BCHamming

Software development
2019 - 2020, Lab 3 course

A python library that, given the data from the electronic instrumentation, calculates the uncertainty of the measurements, does data processing and can output the results directly into Latex.

It can be used to halve the time to produce a lab report and many course mates used it.

https://github.com/LetteraUnica/menzalib

Studies:

Masters degree in Solid State Physics
2019 - 2022, University of Pisa
Thesis: Non-Local Topological Valley-Hall Effect in Bilayer Graphene
Skills learned: Solid state physics, Statistical physics, Quantum computing, Optics, Machine learning, Complex systems

Qiskit global summer school 2021
2021, IBM
2 week-long summer school about quantum machine learning

Bachelor in Physics
2016 - 2019, University of Pisa