

Education

Experience

Sep 2023
in progress

Università Bocconi

PhD in Statistics and Computer Science

- Researched theoretical aspects of artificial neural networks using tools from statistical mechanics and applied mathematics (replica, RMT, diagrammatic resummations)
- Built and ran experiments and simulations to validate theoretical predictions on both toy models and realistic ML systems
- Followed several courses on probability, machine learning, statistical physics, algorithmic phase transitions, stochastic processes

Sep 2018
Apr 2020

Politecnico di Milano

Master's Degree in Engineering Physics Nanophysics and Nanotechnology

- Focus on quantum mechanics, statistical physics, computational linear algebra, technology

110 / 110 cum Laude

May 2021
Aug 2021

Udacity

Intermediate Python Nanodegree Program

Feb 2019
Lug 2019

Technische Universiteit Delft

Erasmus Programme Applied Physics

- Focus on quantum computing, many body physics

Mar 2018

Instituto Superior Tecnico Lisboa

Athens Programme Plasma Science and Technology

Oct 2015
Jul 2017

Politecnico di Milano

Bachelor's Degree in Materials Engineering and Nanotechnology

- Focus on mathematical analysis, linear algebra, physics, atomic physics, structural mechanics

109 / 110

Sep 2024
in progress

Università Bocconi

Teaching Assistant

- Helped prepare course material, held exercise sessions and office hours and marked examinations for courses in logic, statistics, stochastic processes and classical mechanics

Sep 2024
Nov 2024

Alkemy

Applied Research Project Candidate

- Researched state of the art ML models for TTS and STT tasks, understanding their architectural specifications and testing their performance methodologically
- Implemented the best candidates in an API based on an AWS EC2 instance

Jun 2021
Aug 2023

Accurat

Developer and Scientist

- Developed enterprise-level web experiences and native apps, with a focus on custom visualizations of complex datasets that required ad hoc solutions
- Applied raw geometry and algorithms to build solid and optimized graphical interfaces
- Defined and applied new analytical methods to make design choices more effective

Oct 2020
Mar 2021

European Synchrotron Radiation Facility

Scientist Trainee

- Readapted a state of the art vacuum chamber
- Planned and performed experiments on self fabricated samples grown at the nanoscale in UHV
- Researched and implemented the best models for the description of quantum phenomena, extracting data with multi-parametric fittings

Nov 2017
Jan 2020

Asfero Films

Co-founder, director

- Directed and edited corporate and artistic videos, coordinating multi-disciplinary teams with time and budget constraints
- Delivered content to more than 40 clients like: Nike, IBM, L'Oreal, Primark, Virgin Records

Language

C1 English - TOEIC 2017
A2 German - Goethe Zertifikat 2014
Beginner French

Hobbies and interests

Climbing
Science communication (@large_deviations)
Visual arts (www.filippoelgorni.com)

Computer skills

(github.com/filippoelgorni)

JavaScript (node, TS, React, d3, svelte)
Python (tensorflow, fastapi, beautifulsoup)
Julia
R (tidyverse, ggplot)
Clojure (basic knowledge, self taught)
Adobe Suite (Pp, Ps, Id, Lr)
MatLab
Git

April 2026

Filippo Elgorni