CV

Name:	Christian Horvat
Date of birth:	01.06.1990
Adress:	Dialogweg 6, 8050 Zurich, Switzerland
Mail:	ch@carbon.copy.org
Nationality:	German

Education

01/2019-12/2022	PhD in Theoretical Neuroscience
	University of Bern
	Thesis Title: Density Estimation on low-dimensional manifolds
10/2012-09/2015	Master's in Mathematics
	Technical University of Berlin
	Specialized in stochastic modelling and mathematical physics
10/2009-09/2012	Bachelor's in Mathematics
	Free University of Berlin
	Theoretical Physics as minor subject
2002-2009	Karl Friedrich von Siemens Gymnasium in Berlin

Experience

09/2023-Present	Vice-president of "Verein Carbon Copy"
02/2023-08/2023	PostDoc in Theoretical Neuroscience
	University of Bern

09/2017-12/2018	Scientific Collaborator **University of Zurich** Chair of Mathematics for Business and Economics
02/2017-08/2017	Teacher for mathematics (high school level)
12/2015-04/2016	Painter and Decorator in Melbourne (Australia)
04/2015-10/2015	Tutor for Partial Differential Equations for engineers
2011-2014	Working Student at Siemens AG, Production chain optimizations using R

Extracurricular activities

2020 – present	Co-Founder of “Verein Carbon Copy”
June 2020	Swiss Science Film academy participation, “Learning Machine”
2019	PhD and Postdoc retreat organizer, University of Bern

Interests

Physics:

Quantum mechanics

Statistical Physics

Stochastic Modelling:

Interacting particle systems

Markov and Martingale processes

Artificial Intelligence:

Manifold Learning

Unsupervised Learning

Generative modeling

Latent variable models

Other:

Meditation

Movie making

Digital democracy

Data Visualization

Software skills

MATLAB	(good)
R	(good)
Python	(very good)
Vega	(Beginner)
Latex	(Expert)

Languages

German	(mother tongue)
English	(C2 level)
Serbian	(B1 level)
Spanish	(A2 level)

Publications

Horvat, Pfister (2021). Denoising Normalizing Flow, *Neural Information Processing Systems (NeurIPS), 2021*.

Horvat, Pfister (2022). Intrinsic dimensionality estimation using Normalizing Flows. *Neural Information Processing Systems (NeurIPS), 2023*

Horvat, Pfister (2023). Density estimation on low-dimensional manifolds: an inflation-deflation approach. *Journal of Machine Learning Research (JMLR) 24, 2023*

Relevant links

Carbon Copy: https://www.carbon-copy.org/

Google scholar: https://scholar.google.com/citations?user=LpRirZAAAAAJ&hl=de

Github: https://github.com/chrvt