

Marnix Van Soom

CREATIVE/RESEARCHER/DEVELOPER



A creative and sensitive mind with strong technical foundations. Working between probabilistic machine learning and media art. Trying to understand bigger questions. Making things with others.

REACH

marnixvanso.com

[mvsoom](https://mvsoom.com)

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FOCUS

probabilistic machine learning
creative AI systems
human-machine interaction
speculative design and worldbuilding
aesthetic and technical coherence
interdisciplinary collaboration

TECHNICAL

Python

Julia

R

C/C++

JavaScript

JAX

PyTorch

Linux

Docker

Raspberry Pi

Google Cloud

LANGUAGES

Dutch native

English fluent

French intermediate

Portuguese basic

INTERESTS

Design

Reading

Mindfulness

SELECTED CREATIVE WORK

complete list at marnixvanso.com/media

Oct 2025

SUNSTREAM.TV – Online stream forecasting the Sun in real-time

Ongoing cooperation with Jo Caimo (artist) and James Walsh (Cambridge) to predict the state of the Sun eight minutes ahead from continuously incoming satellite data. I am developing a high-quality model based on the recent SDO-FM foundation model to make this possible for the first time. I built a custom pipeline that compiles C++ code and PyTorch Lightning to WebAssembly to run the model natively in users' web browsers.



April 2025

GRAPHOMANIAC – Interactive AI that responds creatively in the moment

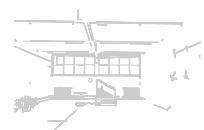
Online installation (click to visit) emitting a continuous stream of observations and inner thoughts about its environment. The AI has real-time vision and reacts instantly and naturally to whatever it perceives.

He looked, left just now and it's still thinking whatever 'I' see someone

Nov 2024

SPELLS & PROMISES – Exposition

I conceived and led the production of this contemporary art exhibition, which brought together seven artists working with emerging technologies as artistic media. The show was picked up by several leading art blogs: ofluxo.net, fakewhale.xyz, saliva.live, and kubaparis.com.



Sep 2024

NEO SEER – 3D-printed sculpture housing autonomous AI

Collaboration with Mathias Mu (Royal Academy of Fine Arts Antwerp) in which we designed a biomorphic 3D-printed sculpture hosting autonomous AI. I gathered training data, performed data augmentation, tested and deployed the LLM pipeline for continuous high-throughput processing, and installed it on an embedded Raspberry Pi with robust communication and fault tolerance. We showed this piece at several exhibitions, and it later became a subject of study by the PALETTES research group (KU Leuven).



SELECTED RESEARCH WORK

complete list at marnixvanso.com/research

A WEAKLY INFORMATIVE PRIOR FOR RESONANCE FREQUENCIES

Article

We derive a new prior for resonance frequencies from the maximum entropy principle.

GROWING NETWORKS WITH A GIVEN ASSORTATIVITY COEFFICIENT

Research notes

I propose a novel minimally biased way to sample or grow assortative networks.

NEXT LEVEL NAMING GAME

Pluto notebook

How do successful communication strategies emerge, and by which social networks?

SYNCRETIC ANIMACY

Essay

Are we capable of authentic interactions with animate artwork that can think and watch back?

HIGHER EDUCATION

MSC IN PHYSICS & ASTRONOMY (CUM LAUDE)

UGent

Acquired strong fundamentals in mathematical modeling and scientific coding, with thesis work published in *Scientific Reports*.

2010 - 2017

PHD IN COMPUTER SCIENCE

Vrije Universiteit Brussel

PhD combined with government artist grant. Working on Bayesian nonparametrics, signal processing, and network theory.

2018 - present