

Nassim Massaudi

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AI Engineer & Independent Researcher | World Models · Optimal Control · Applied ML

SUMMARY

Lead AI Engineer and Researcher specializing in World Models (JEPA) and Optimal Control. Trained at Mila. Proven expertise in the end-to-end delivery of scalable ML systems (RAG, Forecasting) on cloud infrastructure (GCP/Azure). Successfully secured **\$1.1M+** in R&D funding through rigorous technical auditing and scientific formalization.

EDUCATION

Mila - Quebec AI Institute / University of Montreal <i>M.Sc. in Computer Science - Artificial Intelligence</i>	Montreal, Canada 2023 – 2024
Laval University <i>M.Sc. in Computer Science - Artificial Intelligence</i>	Quebec City, Canada 2020 – 2023
ECE Paris (Graduate School of Engineering) <i>Engineering Degree - CS & Information Systems Security</i>	Paris, France 2019 – 2022

TECHNICAL SKILLS

Machine Learning: Deep Reinforcement Learning (Model-Based & Free), World Models (JEPA), Representation Learning, LLMs & RAG.
Stack: Python (JAX/Flax, PyTorch), C++, SQL, Bash/Unix.
Infrastructure: GCP (Vertex AI, GKE), Azure, Kubernetes, Docker, Slurm, CI/CD.
Interests: Optimal Control, Differentiable Physics, Orbital Mechanics.

PROFESSIONAL EXPERIENCE

Lead AI Engineer & Architect <i>AI Global Pros</i>	2019 – Present Montreal, Canada
<ul style="list-style-type: none">• Technical Formalization & Scientific Audit (RS&DE): Authored rigorous technical documentation justifying technological advancements in GAN and RL architectures. Defended experimental methodologies against federal auditors to secure \$1.1M+ in research tax credits, successfully overturning prior rejections through technical authority.• Production RAG Architecture (Camions BL): Designed and deployed a scalable RAG assistant on Azure. Implemented complex retrieval logic for repair order analysis, resulting in a 37% increase in operational efficiency and significant reduction in diagnostic cognitive load.• High-Dimensional Forecasting (NAPA Auto Parts): Built a GCP-native forecasting platform predicting demand for 2,000,000+ customer-product pairs. Optimized data pipelines and model inference on GKE to provide real-time actionable intelligence to distributed field teams.• Distributed AI Platform (Vidéotron): Developed containerized forecasting models within a high-throughput Kafka/Kubernetes environment. Ensured robust deployment of ARIMA/XGBoost models for real-time mobile data stream processing.	

PUBLICATIONS

L. Maes, Q. Le Lidec, D. Haramati, N. Massaudi, D. Scieur, Y. LeCun, R. Balestriero.
"stable-worldmodel-v1: Reproducible World Modeling Research and Evaluation." arXiv:2602.08968 [cs.AI], 2026.
[Link to Paper](#)

RESEARCH PROJECTS

State Representation Learning for Visual Deep RL <i>Mila Research Institute</i>	2024 Montreal, Canada
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- Analyzed SOTA methods for learning from high-dimensional visual inputs. Benchmarked generalization capabilities on **DMControl** tasks using **PyTorch**, focusing on encoder robustness in non-stationary environments.

Non-Contrastive Representation Learning Analysis

2023

Laval University

Quebec City, Canada

- Evaluated SimSiam and Barlow Twins architectures for robotics perception. Investigated collapse prevention mechanisms in the absence of negative pairs, a key factor for sample-efficient robot learning (implemented in **PyTorch**).