LUCA HERR-TTI HERRANZ CELOTTI

Deep Learning Critical Representations Expert

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 ♀ Montreal, Qc

EXPERIENCE

Co-founder of Kiwano and TrackAttApp Al crypto trading + attention tracking

Hebruary 2022 - ongoing

- Montreal, Canada
- We created Kiwano Portfolio, an open source platform to backtest, livetest and livetrade any trading algorithm of your creation on cryptos through Binance. 3 more Kiwano products to release soon.
- TrackAttApp allows you to know how you are really spending your time.

PhD student in Machine Learning

Critical Initializations for Recurrent and Neuromorphic Deep Learning

- 🛗 April 2016 December 2023 🛛 🛛 💡 Université de Sherbrooke, Canada
- Supervisor: Jean Rouat
- Lead organizer for the NeurIPS Workshop DLDE2021, DLDE2022, DLDE2023

Internship in Computational Neuroscience

Uncertainty Propagation in Population Coding

🛗 October 2014 – October 2015

- Supervisor: Alexandre Pouget
- Our l'université de Génève, Switzerland
- Supervisor: Alexandre Pouget

Master in Biophysics Information Transfer between Neurons

M October 2012 – October 2013

Viniversidad Autónoma de Madrid, Spain

- Supervisor: Nestor Parga
- Final grade: 2nd best among 14 students, 87.8%
- Master Thesis on Neuroscience: "Information transfer during a perceptual decision task"

Erasmus Scholarship

Directed Networks for Citation Graphs

- Yearlong Project on Graphs: "A dimensional analysis on directed networks for citation graphs"

• Maths (Topology, Differential Geometry, Group Theory, Graphs) and Psychology lectures

Undergraduate in Physics Theoretical Physics

- October 2007 October 2012
 - Ctober 2007 October 2012
- Final grade: 9th best among 64 students, 81.7%
- %

• Universidad Autónoma de Madrid, Spain

PUBLICATIONS

- Calvet, E. Hertti, L. and Valimamode, K. (2023). "SmartDCA superiority". In: submitted.
- Herrtti, L. and Rouat, J. (2023). "Stabilizing RNN Gradients through Pre-training". In: submitted.
 Herrtti, L. and Rrapaj, E. (2023). "Less is More! A slim architecture for optimal language translation". In: ENLSP-III, NeurIPS Workshop.
- Hosseini, M., Celotti, L., and Plourde, E. (2022). "End-to-End Brain-Driven Speech Enhancement in Multi-Talker Conditions". In: IEEE/ACM Transactions on Audio, Speech, and Language Processing.
- Herrtti, L. and Rouat, J. (2022). "Surrogate Gradient Design". In: submitted to IEEE.
- Celotti, Luca, Brodeur, Simon, and Rouat, Jean (2021). "AriEL: volume coding for sentence generation comparisons". In: *arXiv preprint*.
- Hosseini, M., Celotti, L., and Plourde, E. (2021). "Speaker-independent Brain Enhanced Speech denoising". In: ICASSP.
- Brodeur, S., Perez, E., Anand, A., Golemo, F., Celotti, L., Strub, F., Rouat, J., Larochelle, H., and Courville, A. (2018). "HoME: a Household Multimodal Environment". In: *ICLR Workshop Paper*.
- Celotti, L., Brodeur, S., and Rouat, J. (2018). "Language Coverage and Generalization in RNNbased Continuous Sentence Embeddings for Interacting Agents". In: ViGIL 2018, NeurIPS Workshop.
- Brodeur, S., Celotti, L., and Rouat, J. (2017). "Proposal of a Generative Model of Event-based Representations for Grounded Language Understanding". In: *Proc. GLU 2017*.

STRENGTHS

Python/Matlab	00000
TensorFlow/PyTorch/JAX	
Deep Learning	00000
Spiking Networks	00000
Reinforcement Learning	
Linux	
GitHub/LaTeX/Slurm	
EEG Processing	
Programming Drones	
Flask/Docker/Kubernetes	

LANGUAGES

English/Spanish/Italian	
French	
German	
Chinese/Arabic/Persian	

OTHERS

- Passionate reader.
- Playing football (soccer), even if now I do it seldom, gives me the opportunity to be creative at understanding spaces and actions, peoples' rhythms at moving, how to break the rhythms, their personal understanding of movement, their weaknesses and strengths, while working towards the team's common goals and keeping the team motivated.
- Exploration of different musical instruments like the violin, the guitar, the piano and the drums. I was also a drummer in a Samba band.
- I volunteered two summers with a CSIC researcher in Physics, on "Bohmian Trajectories".
- Hitchhiking 4 000km in a year means holding myself responsible and finding enjoyment in looking for creative solutions. From Budapest to Athens in 15 cars and a lot of walking.
- Background actors in a Hollywood and in a Bollywood movie :)
- Won a drone in the 2015 Kyoto Machine Learning Summer School against 400 students.

REFEREES

Prof. Jean Rouat @ jean.rouat@usherbrooke.ca

Prof. Ugo Bastolla @ ubastolla@cbm.uam.es