



Carlos Loza

Machine Learning Scientist,
Fulbright Scholar

- Sep. 20, 1985
- 617 N Cascades Av. Unit 1
Pflugerville, TX
- <https://www.carlos-loza.com>
- carlos85loza@gmail.com
- Ecuadorian
Legally authorized to work in USA

Social Network

- carlosloza
- carlosloza

Hard Skills

- Python, MATLAB, Git, Docker
pandas, scikit-learn, numpy, scipy,
tensorflow probability, keras,
matplotlib, seaborn
- Probabilistic Machine Learning
Computational Neuroscience
Statistical Signal Processing
Robust (outlier-aware) modeling

Soft Skills

- Exceptional communication skills
- Able to work effectively in
multidisciplinary teams
- Resiliency

Languages

- Spanish ●●●●●
- English ●●●●●
- Italian ●●●●●

Scientific services

Reviewer for IEEE ICASSP, IEEE MLSP,
IEEE Transactions on Signal Processing,
MDPI Entropy, MDPI Applied Sciences

1 PhD degree, 3 Master degrees, 18 peer-reviewed publications
Experienced machine learning scientist in the areas of probabilistic modeling, time series, and computational Neuroscience. Strong track-record of coding skills, statistical analysis, machine learning first principles, and drawing insights from complex data. Resilient, driven, and with superior communication skills.

Experience

- 2020 – present **Machine Learning Researcher** The University of Texas at Austin
Postdoctoral fellow in charge of algorithm design for modeling and real-time detection of gamma oscillations in rodent hippocampus.
Achievements: Increase in 30% of the AUC of precision-recall curve.
- 2017 – 2020 **Machine Learning Researcher** Universidad San Francisco de Quito
Design of supervised and unsupervised learning algorithms applied to biosignals, images, and chemometrics.
Achievements: 10 peer-reviewed papers published as first (most of the times sole) author during a 2.5-year tenure.
- 2013 – 2017 **Graduate Research Assistant** University of Florida
Part of collaborative and solo projects at CNEL lab involving the intersection between machine learning and neuroscience.
Achievements: Design of novel generative model for neuronal signals.
- 2010 – 2012 **Associate Professor** Universidad San Francisco de Quito
Part of the Electrical Engineering department.
Achievements: Design of advanced signal processing courses.

Education

- 2014 – 2017 **PhD** University of Florida
Electrical and Computer Engineering. GPA: 3.87/4
- 2015 – 2016 **Master of Science** University of Florida
Biomedical Engineering. GPA: 3.97/4
- 2012 – 2014 **Master of Science** University of Florida
Electrical and Computer Engineering. GPA: 3.84/4
- 2008 – 2009 **Master of Science** Politecnico di Torino
Navigation and Related Application. GPA: 27.02/30
- 2003 – 2007 **Bachelor of Science** Universidad San Francisco de Quito
Electrical Engineering. GPA: 3.66/4

Selected publications

- 2021 **Deep Neural Dynamic Bayesian Networks applied to EEG sleep spindles modeling**
Carlos A Loza, Laura L Colgin
arXiv, cs.LG, v2, 2021-03-03
- 2019 **RobOMP: Robust variants of orthogonal matching pursuit for sparse representations**
Carlos A Loza
PeerJ Computer Science
- 2017 **A marked point process framework for extracellular electrical potentials**
Carlos A Loza, Michael S Okun, and Jose C Principe
Frontiers in systems neuroscience
- 2016 **Transient model of EEG using Gini index-based matching pursuit**
Carlos A Loza and Jose C Principe
IEEE ICASSP

Awards and honors

- 2019 Collaboration Grant: \$10000 Universidad San Francisco de Quito
- 2017 Student Paper Competition finalist IEEE EMBS NER conference
- 2014 – 2017 Research assistantship Michael J Fox Foundation, University of Florida
- 2012 – 2014 Fulbright grant for faculty development Fulbright Program