

Juan Manuel CORIA


PhD Student in Continual Representation Learning

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Academic Studies

 **PHD: CONTINUAL REPRESENTATION LEARNING - Nov. 2019 – Present**
Université Paris-Saclay, LIMSIS (CNRS), France
Can we build neural models that learn across their lifetime? Can we continually represent an infinite flow of data? How can this be applied to language?



MSC: SOFTWARE ENGINEERING - Sep. 2018 - Sep. 2019

Université de Paris (75013), France

Distributed Programming. Advanced OOP. Machine Learning. Deep Learning. Typing. Functional Programming. Search Engines.

Average Score: **18.59/20**



MSC: COMPUTER SCIENCE - Mar. 2013 - Feb. 2018

Universidad Nacional de La Plata, Argentina

Algorithms. Data Structures. OOP. Math. Computer Science Theory. Machine Learning. Operating Systems. Distributed/Parallel Systems.

Average Score: **8.91/10**

★ *Distinguished Graduate Student Award 2017, UNLP*

★ *Joaquín V. González Award 2017, Computer Science, La Plata's Town hall*

Research Experience



INTERNSHIP: REPRESENTATION LEARNING - Apr. 2019 – Sep. 2019

LIMSIS (CNRS), Paris, France

Study of loss functions to represent semantics in text and speaker identity in speech. Findings reveal that the best loss depends on the task at hand. Some are also more flexible allowing self-supervision.



INTERNSHIP: MACHINE LEARNING FOR NLP - Mar. 2017 – Jan. 2018

LIFIA, La Plata, Argentina

Machine learning for subjectivity detection in hispanic literature. Collected data. Compared SVM and MLP. Found both have similar performance but SVM is more stable across runs. Analysis of feature importance using SVM parameters.



INTERNSHIP: INITIATION TO RESEARCH - Mar. 2015 – Mar. 2016

III LIDI, La Plata, Argentina

Development of an IDE communicating with toy robots to teach parallel programming to beginners. Presented work at an exposition.

Software Engineering Experience



UBYKUO: LEAD ANDROID DEVELOPER - May 2018 – Sep. 2018

Design and implementation of a VoIP app. Talks given.



GLOBANT: ANDROID DEVELOPER - May 2017 – May 2018

Development of Papa John's app. Development of data processing pipeline using Google Cloud.



DEVSAR: ANDROID/IOS DEVELOPER - Dec. 2015 - May 2017

Development of FinTech and car parking apps (among others). Trained developers on new Android technologies. Talks given.

Hobbies

Projects (Software libs, apps). **Language Learning**.
Reading (Scientific, Sci-Fi). **Music** (saxophone, guitar)

Skills

Programming Languages

Python, Java, Scala, JS, Haskell

Tools and Libraries

PyTorch, Scikit-Learn, NumPy, Pandas, Git, SLURM

Languages

Spanish: Native
French: C2
English: C1
German: B1
Chinese: A2/B1

Publications

[A Metric Learning Approach to Misogyny Categorization](#)

1st author, [Repl4NLP](#), [ACL 2020](#)

Metric learning losses are not better than cross entropy on this task. Insights on what metric learning is useful for. Improved SOTA by a 4.4% margin.

[A Comparison of Metric Learning Loss Functions for End-to-End Speaker Verification](#)

1st author, accepted at [SLSP 2020](#)

Comparison of 5 losses to represent speakers. Additive Angular Margin loss has a relative 38% error rate improvement over cross entropy with the same architecture.

[pyannotate.audio: Neural Building Blocks for Speaker Diarization](#)

3rd author, [ICASSP 2020](#)

PyTorch based framework for speaker diarization. Contributed to the speaker embedding module with code and experiments.

Courses

[LxMLS Summer School](#) – 2020
IST, Lisbon, Portugal (virtual)

Deep Learning for NLP – 2020
UPSAY, Paris, France

SLURM – 2019
LIMSIS, Paris, France

Cloud Computing – 2016
III LIDI, La Plata, Argentina

Test Driven Development – 2015
LIFIA, La Plata, Argentina