JULES CAUZINILLE

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EDUCATION

Ph.D. in Computer Science, Aix-Marseille Université (LIS, LPC, LPL) Expected 2025
ILCB grant recipient

Master in Natural Language Processing, Université Paris Cité 2020 - 2022
Relevant Coursework:
Deep learning for speech understanding, Computational questions in phonology and speech processing

Bachelor in Computational Linguistics, Université Paris Diderot 2019 - 2020

Master in Specialized Translation, ISIT 2016 - 2018

Bachelor in Modern Literature and Audiovisual Arts, Université Sorbonne Nouvelle 2015 - 2016

RESEARCH EXPERIENCE

Aix-Marseille Université Sept 2022 - present
Ph.D. - Computer Science *Marseille, France*
"Self-supervised representation learning for primate vocalizations : from analysis to synthesis"
Supervisors: Benoit Favre, Ricard Marxer (LIS), Arnaud Rey (LPC) and Thierry Legou (LPL)

- Build self-supervised representation learning models, inspired from speech processing, for bio-acoustic data
- Conduct probing experiments to better understand large DL models behavior on out-of-domain acoustic data
- Investigate the existence of acoustic units in primate's vocal communication
- Develop a data-driven vocal synthesis model for non-human primate's vocalizations
- Investigate the effects of noisy training data on self-supervised models performances

LISN - CNRS Jan 2022 - Jul 2022
Master's researcher *Paris, France*
Supervisor: Marc Evrard

- Built an annotation framework on spoken affective expressivity in broadcast political interviews
- Developed machine learning models for the recognition of arousal from speech
- Studied the role of affective expression on prosody variation

LIMSI - CNRS Apr 2021 - Jun 2022
Master's researcher *Paris, France*
Supervisor: Ioana Chitoran

- Studied the acoustic footprint of discursive markers on speech
- Experimented with DL models for the automatic identification of discursive markers from speech

Université Paris Diderot	Apr 2020 - Jun 2021
Bachelor internship	*Paris, France*

Supervisor: Lisa Brunetti

- Technical tasks on the collection, processing and transcription of spoken data for the NOCANDO corpus

COMPUTER SKILLS

Programming	Python, Java
Deep learning frameworks	Pytorch, Keras, Scikit-learn
Speech processing	Praat, Winpitch
Music softwares	SuperCollider, Logic Pro, Ableton

LANGUAGES

Mother tongues: French, Italian
Fluent: English, Spanish

SIDE PROJECTS

Passive acoustic recording of bonobos - Developing an acoustic recording setup in the *Vallée des Singes* to build a large dataset of bonobos vocalisations

Visually processing live music - Developing computational programs to visually display music during improvisation concerts with students from the *Conservatoire de Paris* (CNSM)

PUBLICATIONS

- Cauzinille J., Evrard M., Kiselov N., Rilliard A. (2022, June). Annotation of expressive dimensions on a multimodal French corpus of political interviews. In Proceedings of the LREC 2022 workshop on Natural Language Processing for Political Sciences (pp. 91-97).