

Bernardo TORRES

PhD Student at Telecom Paris

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EDUCATION

- 2023-Present **PhD Student in Computer Science**, *Telecom Paris, Institut Polytechnique de Paris, Palaiseau, France*
Music understanding, source separation and audio synthesis using hybrid deep learning
Part of HI-Audio project (Hybrid and Interpretable Deep Neural Audio Machines)
- 2021-2022 **M.S. in Computer Science**, *ENS Paris-Saclay, Gif-sur-Yvette, France*
Mathematics, Vision and Learning (MVA) master's program. Highest honors.
Deep Learning, Artificial Intelligence, Audio and Speech processing, Computer Vision
- 2020-2022 **B. S. in Computer Science**, *Telecom Paris, Institut Polytechnique de Paris, Palaiseau, France*
Signal Processing, Machine Learning, Embedded Systems. GPA: 4.0.
- 2016-2022 **B. S. in Electrical Engineering**, *Universidade Federal de Minas Gerais, Belo Horizonte, Brazil*
Electrical, Electronics and Computer Engineering

WORK EXPERIENCE

- Apr. 2022-Sep. 2022 **Research Intern**, *Sony Computer Science Laboratories, Paris, France*
Research topic: Singing Voice Conversion in a music production context
Research in Deep Generative models, Neural Audio Synthesis, Self-Supervised Learning
- Jul. 2019-May 2020 **Data Science Intern**, *Radix Engineering and Software, Belo Horizonte, Brazil*
Worked with data science and machine learning with a focus in predictive maintenance and anomaly detection
Trained and deployed models based on statistical quality control and LSTM networks

PUBLICATIONS

- Torres, B., Lattner, S. and Richard, G., 2023. *Singer Identity Representation Learning using Self-Supervised Techniques*. In International Society for Music Information Retrieval Conference (ISMIR 2023).

TEACHING EXPERIENCE

- 2023-Present **Teaching assistant**, *Telecom Paris, Institut Polytechnique de Paris, Palaiseau, France*
Help in lab assignments for the following courses: *Deep Learning I*, from IP Paris' Data Science M. S. program; *TSIA 201 Signal Processing*; *TSIA 206 Speech and audio processing*.

PROJECTS

- 2018-2019 **Head of electronics**, *Formula SAE UFMG - Formula Student Team from Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil*
Lead a group of 8 people in the design, manufacturing and testing of the electrical and electronics subsystems
Designed, developed and deployed an embedded data acquisition system
- 2017-2019 **Team member - Telemetry and Data**, *Formula SAE UFMG, Belo Horizonte, Brazil*
Designed the team's first telemetry system, from embedded board design to user interface development

SKILLS

- Spoken Languages:** Portuguese (native), English (fluent, Cambridge CAE C2), French (fluent), Spanish (B2)
- Programming Languages:** Python, C, C++, SQL, SystemVerilog
- Software, Platforms:** Git, Linux, LaTeX, Matlab, Microsoft Azure, Solidworks, Pi System, LabView
- Other/Interests** Music, Sound synthesis, Electronic Music Production/Mixing, Contemplative Sciences, Meditation