Pedro Ramoneda Franco

Technologist, Pianist and PhD candidate.

@ pedro.ramoneda@upf.edu   📞 +34 676 344 765   ♀ 26 years - Spain   **G Google Scholar**   **⊙ Github**

My PhD thesis focuses on modeling performance difficulty in piano using pedagogically motivated representations under the supervision of Prof. Xavier Serra. By modeling long sequences of musical notes, my research is inspired by the latest developments in NLP and adapts them to the musical context. I have created several datasets for piano difficulty and fingering, integrated into Python libraries such as **mirdata**, where I am one of the main contributors. Furthermore, my research is reproducible, and I distribute several **demos** along with my papers. My ML research interests include multimodal and explainable machine learning, generative models, and human-centered AI.

Experience

Early Stage Researcher and Teacher Assistant
Music Technology Group - Universitat Pompeu Fabra
📅 2021 – Currently   ♀ Barcelona

Research Internship - Automatic Music Generation
Sony CSL - Tokio
📅 feb 2023 – mar 2023   ♀ Remote

Research Internship - mirdata's dev & Repovizz data curator
Music Technology Group - Universitat Pompeu Fabra
📅 2020 – 2021   ♀ Barcelona

Business Information Systems - Admin & Dev
Nina Fruits s.l.
📅 2015 – 2020   ♀ Zaragoza, Spain

Piano teacher
High school: "El Salvador"
📅 2014 – 2016   ♀ Zaragoza, Spain

🔗 Papers

P. Ramoneda, J. J. Valero-Mas, D. Jeong & X. Serra, *Predicting performance difficulty from piano sheet music images*, in Proc. of the 24th Int. Society for Music Information Retrieval Conf., Milan, Italy (2023).

Ramoneda, P., Jeong, D., Eremenko, V., Tamer, N. C., Miron, M., & Serra, X. (2024). *Combining piano performance dimensions for score difficulty classification.* Expert Systems with Applications, 238.

N. C. Tamer, **P. Ramoneda**, and X. Serra, *Violin Etudes: A Comprehensive Dataset for f0 Estimation and Performance Analysis* , in Proc. of the 23rd Int. Society for Music Information Retrieval Conf. (2022).

Ramoneda, P., Jeong, D., Nakamura, E., Serra, X., & Miron, M. *Automatic Piano Fingering from Partially Annotated Scores using Autoregressive Neural Networks.* In Proceedings of the 30th ACM International Conference on Multimedia (2022).

Ramoneda, P., Tamer, N. C., Eremenko, V., Miron, M. & Serra, X. *Score difficulty analysis for piano performance education.* In ICASSP 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (2022).

Ramoneda, P. & Bernardes, G. *Revisiting harmonic change detection.* In 149th AES convention, the Audio Engineering Society, AES149 (2020).

Education

PhD in Information technology
Universitat Pompeu Fabra
📅 2021 – ongoing

Master in Sound and Music Technology
Universitat Pompeu Fabra
📅 2020 – 2021

BSc Computer Science Engineering
Universidad de Zaragoza
📅 2015–2020

BMus Piano Performance, (Paused)
CSMA
📅 2016–2018

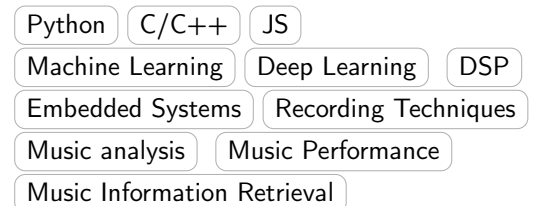### Professional Degree Piano Performance
CPMZ
📅 2009–2015

Languages

Spanish	●●●●●
English	●●●●○
Portuguese	●●●○○

Skills

Python   C/C++   JS
Machine Learning   Deep Learning   DSP
Embedded Systems   Recording Techniques
Music analysis   Music Performance
Music Information Retrieval

A usual work-journey