

PLATAFORMA EDUCATIVA PARA LA DIFUSIÓN DE LA MÚSICA POPULAR EN CASTILLA Y LEÓN

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Goal

- Automated composer of music + lyrics
 - Analogous to having two different people composing a song, in the following order
 - One creates the music
 - Another writes the lyrics
- Focus: Spanish Popular Music
 - Melody
 - Seven diatonic modes
 - Continuous chromaticizations
 - Based on modal paradigms
 - Very uniform beat due to the syllabic text used
 - Always linked to a functionality
 - Lyrics are essential for identifying the purpose!

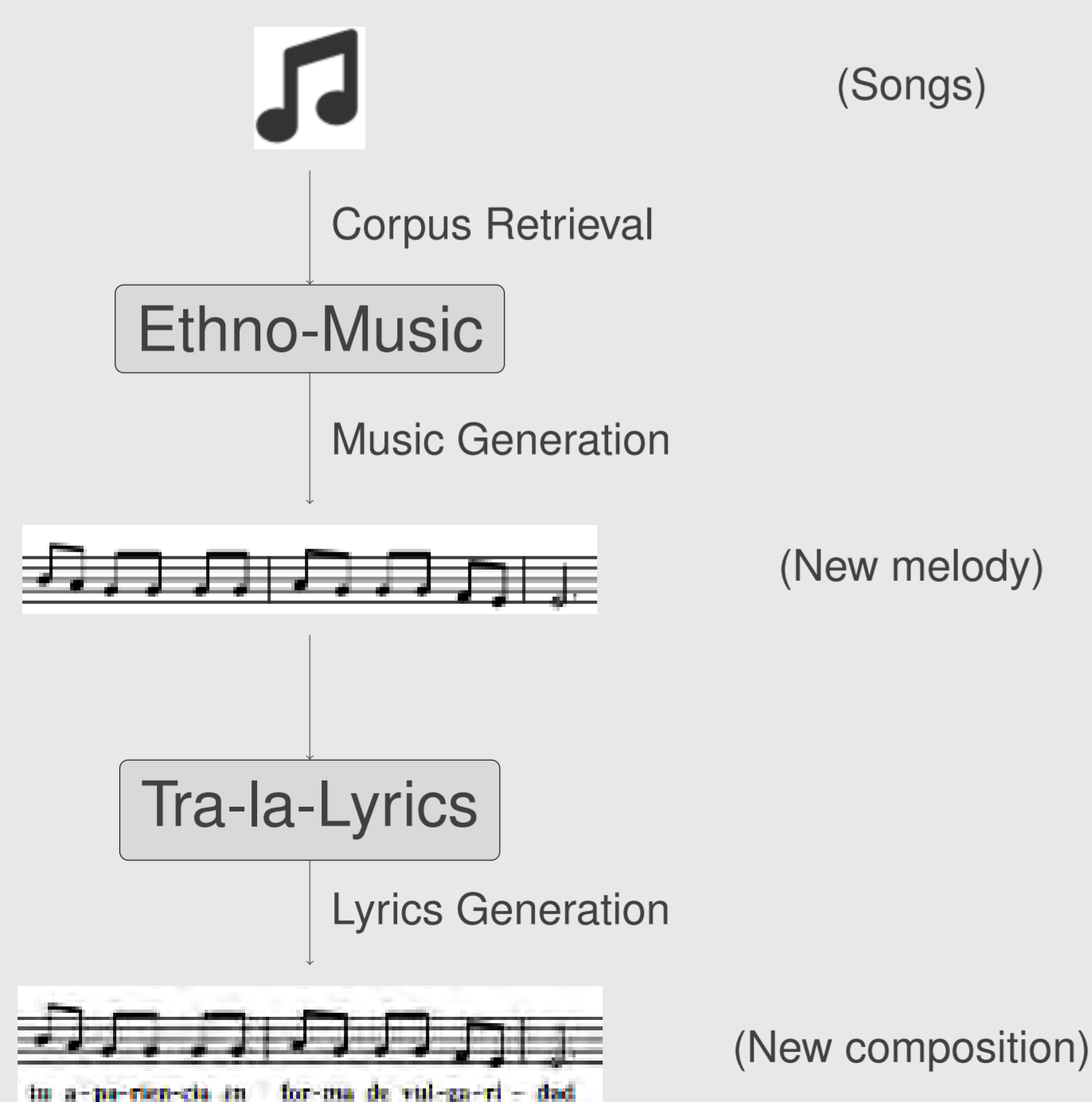
Ethno-Music

- Learns a model for generating new compositions in the style of a corpus of songs
 - In this work, Markov Models are used
 - Encoded features: pitch, duration, degree, first in bar, time signature, musical phrase
 - Corpus of 102 Spanish popular songs in MIDI
 - Similar rhythm patterns, 3/4 time signature, 3-4 musical phrases with similar length, Phrygian mode with possible modifications in its evolution to E minor.

Tra-la-Lyrics [1]

- Generates text based on rhythm
- Current version (2.0) built on top of PoeTryMe [2]
 - Text generated from seed words, a semantic network and a grammar
- Generation steps:
 - Split melody in smaller parts
 - Generate-and-test lines for each part
 - One syllable per note
 - Strong syllables in strong beats (match rhythm!)
 - If possible, end in rhymes
- Customized for generating Spanish lyrics
 - Spanish instantiation of PoeTryMe [3] (Spanish wordnet + grammar extracted from anthology of Spanish poetry)
 - Additional relations from the Spanish part of ConceptNet [4]
 - Grammar augmented with patterns in lyrics of 9,000 Spanish songs
 - Semantic domains:
 - Work in the fields: *trabajo, siega, tierra, sembrar, semillas, trigo, cereales, campo, sol, paja, cosecha, cosechar*
 - Love: *amor, novia, moza, mozo, bella, belleza, feliz, alcoba, morena, guapa, sonrisa, ojos, bonito, bonita*

Integration



Examples

Example 1 (domain: work in the fields)

Take with me this night to join nests

We run out of terraces and exceed pretended levels

Hard color working scratching the better field

Example 2 (domain: love)

You look your appearance in the shape of vulgarity

because of a wonderful and irresistible disease

Your chin and face, my sweet love

somebody stole the key of my heart

Validation

Lyrics produced for 5 melodies...

Item	Rating					M_o	M_d
	1	2	3	4	5		
Melody	0	3	21	36	10	4	4
Sound	1	4	22	39	4	4	4
Rhythm (Melody)	2	9	23	34	2	4	4
Rhythm (Lyrics)	3	13	27	25	1	3	3
Subject	2	12	23	25	8	4	3
Text Meaning	7	17	28	15	3	3	3
Overall Quality	3	5	36	24	2	3	3

Conclusion

- Automated composer of Spanish popular songs successfully built by integrating two existing creative systems
 - Melodies follow the Spanish songs standards
 - Spanish lyrics on topics typically covered by the popular songs
 - Meaning of the lyrics is the least positive aspect
- Future directions
 - Different music generation models
 - Different lyrics generation strategies (evolutionary)
 - Exploit corpus with lyrics of Spanish popular songs
 - Generation of music in other styles

References

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