

# The VocalSearch Music Search Engine

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## ABSTRACT

The VocalSearch system is a music search engine developed at Northwestern University and available on the internet (vocalsearch.org). This system lets the user query for the desired song in a number of ways: sung queries, queries entered as music notation, and text-based lyrics search. Users are also able to contribute songs to the system, making them searchable for future users. The result is a flexible system that lets the user find the song using their preferred modality (music notation, text, music notation). This demonstration lets users try out the VocalSearch system.

## Categories and Subject Descriptors

H.2.8 [Database Applications]: Miscellaneous; J.5 [Arts and Humanities]: Music

## General Terms

Algorithms, Human Factors

## Keywords

music, search, multimedia, interface

## 1. INTRODUCTION

Music collections are a popular category of online multimedia. Examples include the millions of song recordings in Apple's iTunes repository and the 29,000 pieces of popular sheet music in the Lester S. Levy Collection of Sheet Music at Johns Hopkins University.

When one wishes to find a piece of music on iTunes or at the local library, the typical approach is to enter some textual information about the piece (metadata) such as the composer, performer, or title into a search engine. When one knows the music itself, but not the metadata, standard search engines are not an option. New melodic search engines let people search a music collection by specifying the desired melody. For overviews of many existing approaches to melodic music indexing see [1, 2], or the results of the annual series of MIREX music search competitions held in conjunction with the ISMIR conference.

VocalSearch [3] is a music search engine developed at Northwestern University and available on the internet (vocalsearch.org). This system lets the user query for the desired song in a number of ways: sung queries, queries entered as music

notation, and text-based lyrics search. Users are also able to contribute songs to the system, making them searchable for future users. The result is a flexible system that lets the user find the song using their preferred modality (music notation, text, music notation). This demonstration lets users try out the VocalSearch system.



Figure 1. Our search engine: <http://vocalsearch.org>

## 2. REFERENCES

- [1] Typke, R., F. Wiering, and R.C. Veltkamp. A Survey of Music Information Retrieval Systems. in ISMIR 2005: 6th International Conference on Music Information Retrieval. 2005. London, England.
- [2] Dannenberg, R., W. Birmingham, B. Pardo, N. Hu, C. Meek, and G. Tzanetakis, A Comparative Evaluation of Search Techniques for Query-by-Humming Using the MUSART Testbed. Journal of the American Society for Information Science and Technology, 2007: p. in press.
- [3] D. Little, D.R., B. Pardo, User specific training of a music search engine, in Machine Learning and Multimodal Interaction: Fourth International Workshop, MLMI 2007, Lecture Notes in Computer Science. 2007, Springer: Brno, CZ.

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