

an overall better accuracy than other submissions to 2012 MIREX query-by-taping task. Moreover, the computation time is at least 3 times faster than others. We also conducted an experiment to demonstrate that our algorithm performs better and more robustly than other existing QBT algorithms in the case of large databases. In particular, our algorithm has a top-10 hit rate larger than 85% and MRR larger than 60% in both databases when the number of noise MIDIs is as high as 1000.

Although the proposed method performs well in the experiments, the recognition rate still has room for further improvement, especially in the case of “anywhere” anchor position, that is, the user is allowed to start tapping from anywhere in the middle of a song. From the experimental results, we can observe that each algorithm has its strength and weakness in dealing with different queries and database songs. Therefore, one direction of our immediate future work is to find an optimal way to combine these methods for better accuracy.

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