

The thesis summarizes the research in application of statistical methods of computational linguistics in music processing and explains theoretical background of these applications. In the second part methods of symbolic melody extraction are explored. A corpus of approximately 400 hours of melodies of different music styles was created. A melody model using the language modeling techniques was trained on this corpus. In the third part of the thesis the model is used for an attempt to develop an alternative method of audio melody extraction which uses the melody model instead of commonly used heuristics and rules. The chosen approach works well only on simple input data and produces worse results than the commonly used methods on the MIREX contest data. On the other hand, the experiments help to understand the conceptual between the pitch frequency development – the physical melody – and the melody perceived on an abstract level in the symbolic notation – the symbolic melody.