

## **Abstract**

Every chords has a unique characteristic as distinguishing one chord to another. Every chord consists of multiple tones that are played simultaneously and used to represent the harmonic structure in to the sequence dan structure that has a tempo that builds the whole musical structure. So it will take time and instincts in a tone pattern.

Every chord consists of multiple tones that are played simultaneously. Substitution chord from time to time, representate the core of harmony in a musical. In every chord there is a unique characteristic as a distinguishing one chord to another. To be able to recognize chords of a song it needs a musician instinct who often create and play songs. Seeing these conditions, we need a tool that can recognize chord of a song automatically.

Fuzzy Hidden Markov Model (FHMM) is a method that can be used in patern recognition. FHMM is the development statistical model that replace HMM vector quantization process with Fuzzy Clustering Model (FCM). Chroma representation or Pitch Class Profile (PCP) will be used as a feature vector.

The system will output the built form of chord sequence of a music/song. Through the software is expected to assist the user who want to play music when the user does not know or have difficulty in recognizing the chord of a song. According to the test, the best result is 58,26% while system can recognize 36 chords.

***Keywords : Music, Chord, Chroma Vectors, Fuzzy Hidden Markov Models, Fuzzy Clustering***