AlgoJazz

Final Project for CS-185C
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Overview

- ☐ The program creates two tracks in a MIDI file. One track for the chords and one for the melody

- ☐ The program uses statistical chord modeling and a genetic search algorithm to create the tracks

- ☐ Structure of musical segments and measures

Chord Generation Algorithm

Import existing MIDI chord files using ARFF and Weka

First chord random, seeded random afterwards

No duplicated chords, using a note by note comparison

Chord durations are set to half notes

Melody Generation Algorithm

Genetic search of complete measures

Initial population with random pitches and durations

Fitness function tests for number of notes in a measure, distance between notes, total distance, pitch in key and on right half of keyboard, and repeated notes

Evolution adds a new note, changes a pitch to a rest, moves the first and last notes apart, and changes the third note