I propose to create a desktop application which uses parallel programming algorithms in various parts of its functionality. First, it allows the user to search directories for MIDI files. The user can choose a directory to scan, and the program searches all sub folders for MIDI files recursively with a heap. Then, it scans the midi files and extracts data about them to create heatmaps.

This program will use the JUCE application framework, a C++ partially open source library.

The application could also display the heatmap in OpenGL.