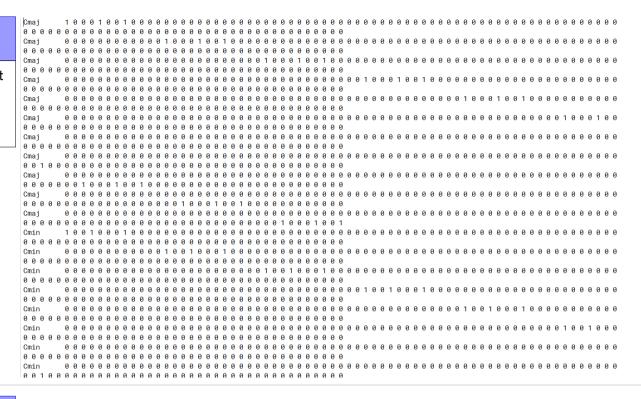
## Fig A07

Text-based dataset of input neuron values for each chord



## Fig A08

Equation for getting the chord number (0-443) given the root note and chord type

## Fig A09

Code written during session on 24 Sep 18

```
def chordmap_2_write(in_file = '../input_dataset_binaries_2.txt', out_file = "../input_dataset_output_binaries_2.txt");
    with open(in file, 'r') as fi:
        rawListChordFile = [i.strip().split() for i in fi]
        print(rawListChordFile[0])
       inputs = []
        for c in range(len(rawListChordFile)):
           inputs.append([])
            for k in range(1, len(rawListChordFile[c])):
               inputs[c].append(rawListChordFile[c][k])
        print(inputs[0])
def list_1_at_index(i, size = 444):
   1 = []
    for k in range(size):
       if k == i:
           1.append(1)
        else:
            1.append(0)
    return 1
def chord_number(chord string):
    if chord string[:2] in ['C#', 'D#', 'F#', 'G#', 'A#']:
        root note string = chord string[:2]
        chord_type_string = chord_string[2:]
    else:
        root note string = chord string[:1]
        chord_type_string = chord_string[1:]
    print(root note string)
    print(chord type string)
   root_notes = ['C', 'C#', 'D', 'D#', 'E', 'F', 'F#', 'G', 'G#', 'A', 'A#', 'B']
    chord types = ['maj', 'min', 'aug', 'dim', 'sus2', 'sus4', 'M7', 'm7', '7', 'aug7', 'dim7', 'o7', 'M7sus2', 'M7sus4', '7sus4', 'M9', 'm9',
'9', 'aug9', 'dim9', 'M9sus2', 'M9sus4', '9sus2', '9sus4', 'M11', 'm11', '11', 'aug11', 'M11sus2', '11sus2', 'mM7', 'mM7(9)', 'M6', 'm6', 'M6(9)',
'm6(9)'1
    root note index = root notes.index(root note string)
    chord_type_index = chord_types.index(chord_type_string)
    return ((37 * root note index) + chord type index)
```