

Actual approach to eighteenth-century counterpoint

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Generation of Two-Voice Imitative Counterpoint from Statistical Models

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ABSTRACT

Generating music based on rules of counterpoint has been deeply studied in music history. In this article, we go to explore how to generate counterpoint by means of a statistical approach. This approach is based on the generation of two voices, one imitative and another counterpointed. The imitative voice is generated by a recurrent neural network that receives as input the previous notes of the two voices. Once the imitative voice is generated, this was counterpointed by a model that generates the second voice. This second voice is generated by a recurrent neural network that receives as input the previous notes of the two voices. The two voices are generated sequentially, so the first voice is generated before the second. The two voices are generated sequentially, so the first voice is generated before the second. The two voices are generated sequentially, so the first voice is generated before the second.

KEYWORDS
Artificial Intelligence, Counterpoint, Music Generation, Recurrent Neural Networks, Melody, Musical Structure, Music Theory

1. INTRODUCTION

In this article, we propose a new way to generate counterpoint. The main idea is to generate two voices, one imitative and another counterpointed. The imitative voice is generated by a recurrent neural network that receives as input the previous notes of the two voices. Once the imitative voice is generated, this was counterpointed by a model that generates the second voice. This second voice is generated by a recurrent neural network that receives as input the previous notes of the two voices. The two voices are generated sequentially, so the first voice is generated before the second. The two voices are generated sequentially, so the first voice is generated before the second.

2. THEORETICAL FRAMEWORK

2.1. Notes and Rhythms

A note is a sound or silence of a certain duration. A note is characterized by its pitch and its duration. The pitch of a note is determined by the frequency of the sound wave. The duration of a note is determined by the time it takes for the sound wave to complete one full cycle. Notes can be represented by musical symbols such as dots, dashes, and vertical lines. Notes can also be represented by numbers, such as 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 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