

Soggetto Cavato

15th Century Data Encoding



Josquin des Prez

- c. 1450–1455 – 27 August 1521
- Franco-Flemish heritage
- Renaissance composer
- Most famous composer that you've probably never heard of
- The first western composer to still be famous after they have died
- Mostly wrote masses, also motetes, and French chansons



Solmization Mass - *Missa Hercules Dux Ferrariae*

Ercole I, Duke of Ferrariae

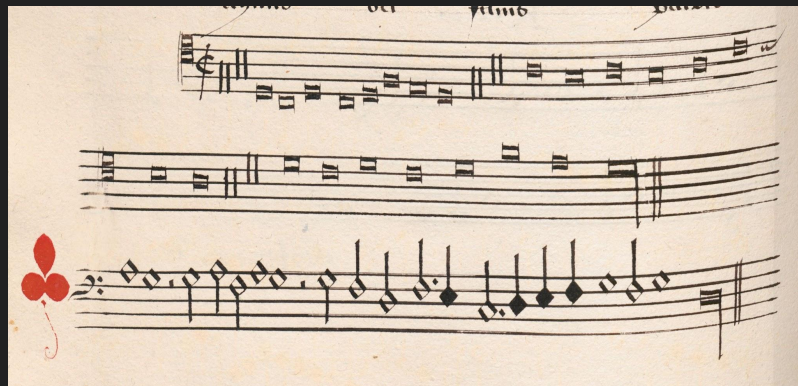
Hercules Dux Ferrariae

Hercules Dux Ferrariae

e-u-e-u-e-a-i-e

Re-Ut-Re-Ut-Re-Fa-Mi-Re

D-C-D-C-D-F-E-D



Building Soggetto Cavato Motifs with Code

- Written in python
- Utilizes regex to extract vowels
- Defines encoding using maps
- Implements custom SoundWave class to generate audio files based on motifs (uses Fast Fourier Transform)
- Open source on Github:
github.com/clarkedb/soggetto-cavato

```
SOLFEGE_MAP = {  
    'a': 'fa',  
    'e': 're',  
    'i': 'mi',  
    'o': 'sol',  
    'u': 'ut'  
}  
  
NOTE_MAP = {  
    'a': 'F',  
    'e': 'D',  
    'i': 'E',  
    'o': 'C',  
    'u': 'G'  
}
```

Building Soggetto Cavato Motifs with Code

```
def encode_string(text):  
    """  
    Parameters:  
        text (str): The text to encode in music.  
    Returns:  
        solfege (list(str)): The solfege terms for the encoding.  
        notes (list(str)): The note values for the encoding (e.g. 'C').  
    """  
  
    # extract vowels from text  
    vowel_pattern = r'^[AEIOU]'  
    vowels = re.sub(vowel_pattern, '', text, flags=re.IGNORECASE).lower()  
  
    # encode solfege and notes  
    solfege = [SOLFEGE_MAP[v] for v in vowels]  
    notes = [NOTE_MAP[v] for v in vowels]  
  
    return solfege, notes
```

Live Demo

