

The VIS Framework: Analyzing Counterpoint in Large Datasets

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The VIS Framework

- Framework for developing symbolic music analysis workflows.
- Library for running counterpoint analysis queries.
- Combines music21 and pandas.
- Designed to integrate with other programs and languages.
- Extensible beyond counterpoint.

Our Online Resources

elvisproject.ca
 github.com/ELVIS-Project
 All our software is free and open source!

Contributors

For their contributions we wish to thank

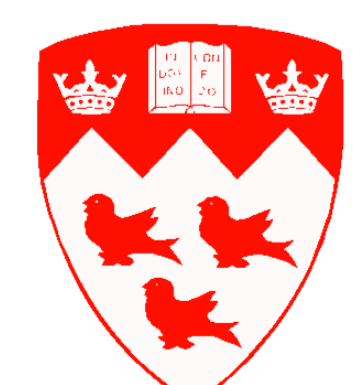
- Natasha Dillabough
- Ichiro Fujinaga
- Andrew Hankinson
- Jane Hatter
- Jamie Klassen
- Alexander Morgan
- Catherine Motuz
- Peter Schubert



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The “Three Generations” Experiment

- contrapuntal differences between three Renaissance periods
- each set named for representative composer
- 3-grams with frequency greater than 0.2% are common

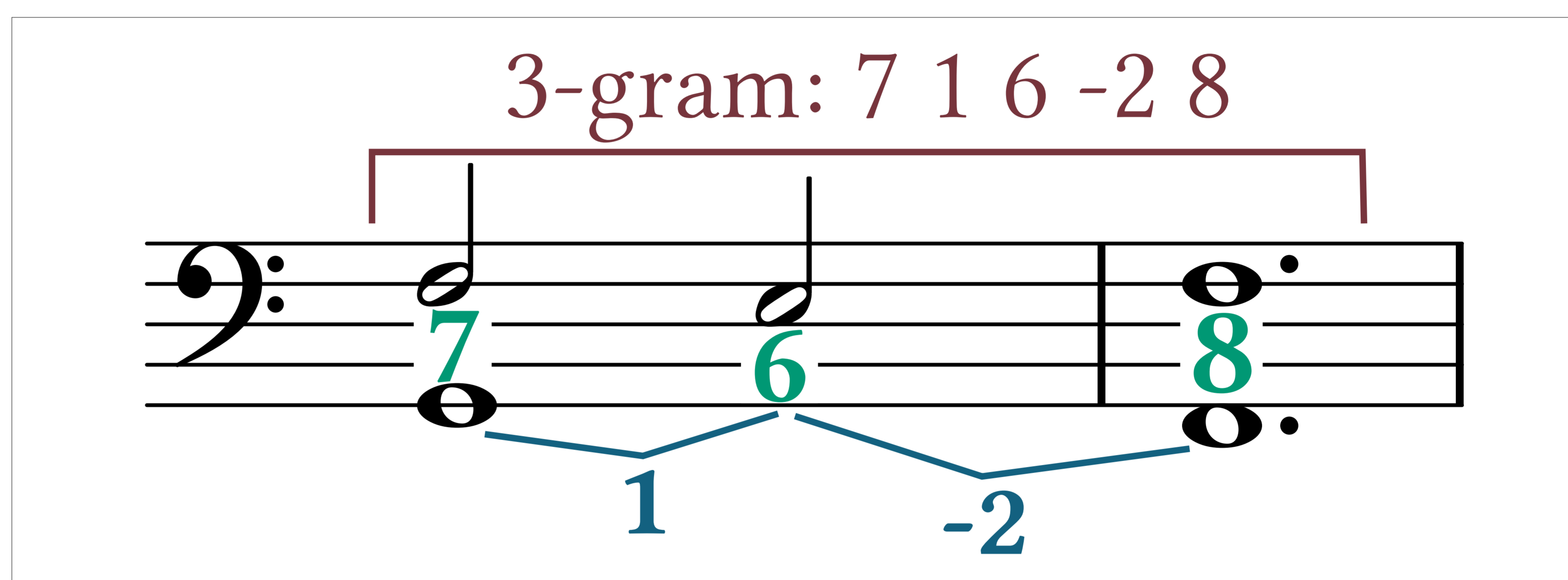


Figure 1: Symbolic score annotated with vertical and horizontal intervals. This is the cadence 3-gram.

The Test Sets

Download our test sets: elvisproject.ca/ismir2014.

Test Set	Date Range	Pieces	Total 3-Grams	3-Gram Types	Repeated Types
Ockeghem	1440–85	50	30,640	10,644	4,509 (42%)
Josquin	1485–1521	56	31,233	9,268	4,323 (47%)
Palestrina	1540–85	53	33,339	10,773	5,023 (47%)

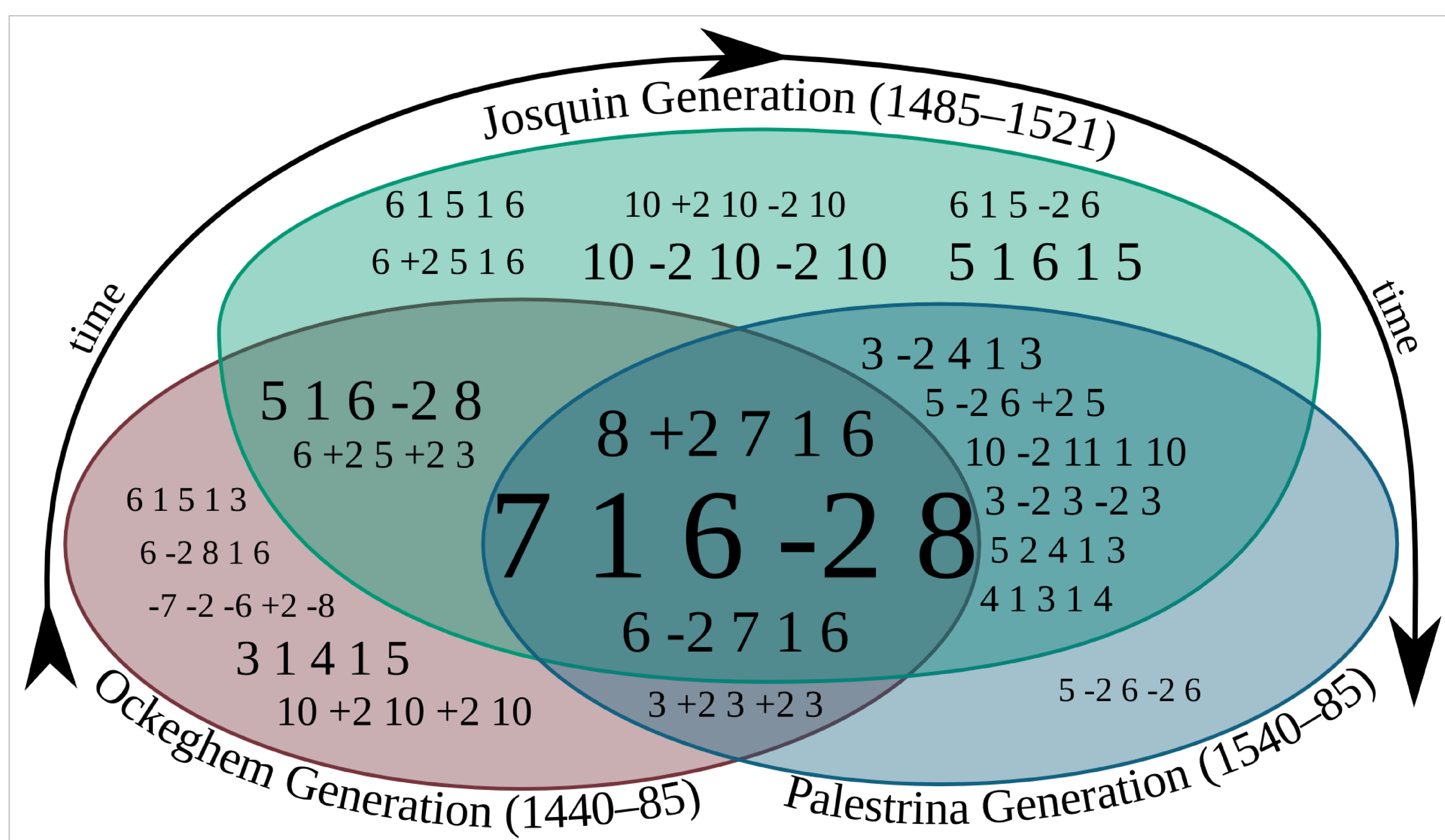


Figure 2: Hybrid Venn diagram, timeline, and word cloud for the “Three Generations” experiment.

Findings

- Only “essential” counterpoint is shared among all periods.
- Each period has unique 3-grams.
- The “parallel thirds” modules are not equally common in all periods.