

A Search and Retrieval Based Approach to Music Score Metadata Analysis

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This research is supported by the Australian Government Research Training Program.

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ABSTRACT

Music metadata is the body of information that music generates, or leaves behind. It is the notes written on an orchestral score by a composer hoping to ensure his or her longevity; a jazz lead sheet or pop music chart that gives musicians basic instructions of what can be played; the informational encoding of bytes on storage devices (such as CDs or MP4 files), that can be used to capture music recordings; the catalogues of information about collections of recordings held by music streaming services.

This thesis will chart the use of this metadata in creating models of music theory and analysis, and its use in creating prescriptive rules around music practice and creation. It will examine new approaches being taken in music score metadata search and retrieval to understand how these might be leveraged in order to allow a rethinking of music score metadata use. Such approaches can reposition music theory and analysis frameworks as sites of dynamic search and retrieval, which can be highly adaptable to an underlying corpus of music scores.

The dissertation features an extended case study demonstrating how such an approach can be applied to ten Keith Jarrett jazz solos that have been transformed into a single large dataset. It will show how this can provide deep insights and new knowledge into Jarrett's improvisational style, and uncover structures that are not possible to find using more traditional models of music analysis.

Reimagining the music score as metadata challenges both how music theory can be understood, and how it can be presented. In responding to this, the dissertation will show how music theory can be viewed as a crowd sourced phenomenon, related to an underlying corpus and other users. To this end it will present a software application, Stelupa, a nuanced search engine to explore music score

metadata, that leverages off many of the features found in other modern music metadata applications such as Spotify and iTunes.

TABLE OF CONTENTS

Certificate of original authorship	i
Acknowledgement	ii
Abstract	iv
Table of contents	vi
List of tables	vii
List of figures	ix
Introduction	1
Chapter 1 The use of music score metadata in traditional music theory and analysis	11
Chapter 2 Music as a problem of information	51
Chapter 3 Jazz improvisation and the style of Keith Jarrett	93
Chapter 4 Tools and technologies used for the case study	123
Chapter 5 Jazz improvisation analysis case study: Ten Keith Jarrett jazz solos	138
Chapter 6 Conclusion and future work	250
Appendix 1 Transcriptions of Keith Jarrett solos	271
Appendix 2 Notes for software related to this dissertation: Music Metadata Builder, Jupyter Analysis Notebooks and Stelupa	325
Bibliography	326

LIST OF TABLES

4.1	Technologies used in dissertation	123
4.2	Steps for preparing data for case study	135
4.3	Sample record of prepared data	136
5.1	General characteristics of the dataset	144
5.2	Sample record taken from the dataset	145
5.3	Characteristics of pitches (as midi numbers) used in dataset	147
5.4	Counts of different types of durations used in the dataset	151
5.5	Average and median notes per measure and standard deviation, grouped by title	164
5.6	Average amount of notes played in a measure, grouped by chord type and title	165
5.7	Three sample records of phrases found in the dataset	167
5.8	Most commonly occurring phrases described by midi number sequence, ignoring rhythm	168
5.9	Count of phrases in each solo, and percentage of phrase in each measure	169
5.10	General characteristics of phrase length in all solos	171
5.11	Short phrase lengths in the dataset	172
5.12	Phrases over 80 notes in length and commencing measure	177
5.13	Count of different length microphrases that can be constructed from the dataset	201
5.14	Top two-note microphrases with note names and no rhythm	208
5.15	Top five three-note microphrases with note names and no rhythm	208
5.16	Top five four-note microphrases with note names and no rhythm	209

5.17	Top five five-note microphrases with note names and no rhythm	209
5.18	Top five six-note microphrases with note names and no rhythm	209
5.19	Top five seven-note microphrases with note names and no rhythm	210
5.20	Midi number counts with and without durations	221
5.21	Count of microphrases with the midi sequence “77, 75, 74, 72”	223
5.22	Most commonly occurring four-note microphrases ignoring rhythm and transposed to start on middle C	224
5.23	Names of harmonic degrees with an example on the root note C	231
5.24	The use of the flat-seventh on beat 2.5 on a dominant chord	237
5.25	Examples of major seventh being used on a dominant chord	238
5.26	Preparation of the major seventh on a dominant chord	238
5.27	Examples of the sharp ninth being used on a major seventh chord	242
5.28	Examples of the fifth being used on a diminished seventh chord	245
5.29	Cross tabulation of harmonic degrees and position in the measure in which they are used on the dominant seventh chord	246
5.30	Cross tabulation of harmonic degrees and position in the measure in which they are used on the diminished seventh chord	247
5.31	Cross tabulation of harmonic degrees and position in the measure in which they are used on the minor seventh chord	248

LIST OF FIGURES

1.1	Example of data from iTunes Database	
	Search API	2
2.1	Example of two notes encoded in MusicXML	65
2.2	Two element n-gram	75
2.3	Use of midi and audio files in Jazzomat	84
2.4	Discography, chordal progressions, and biography information in Jazzomat	85
2.5	Aggregated statistics of Jazzomat	86
4.1	Transcribe software screenshot	125
4.2	Jupyter notebook screenshot	129
4.3	Example of Music21 and Lilpond rendered score	130
4.4	JSON output from Music Metadata Builder	131
4.5	JSON output from iTunes database	132
4.6	JSON output from Music Metadata Builder (annotated)	133
4.7	Music Metadata Builder Score Visualisation	134
4.8	Excerpt from Stella By Starlight transcription	136
5.1	Original phrase (Days Of Wine And Roses)	139
5.2	Phrase ignoring rhythm (Days Of Wine And Roses)	139
5.3	Phrase transcribed to start on middle C (Days Of Wine And Roses)	139
5.4	Phrase transcribed to start on middle C ignoring rhythm	140
5.5	Phrase and microphrase	141
5.6	Pitch classes used in all solos	148
5.7	Notes used across all solos	149
5.8	Midi numbers used across all solos	150

5.9	Count of different chord roots in all solos	152
5.10	Count of different chord types in all solos	153
5.11	Number of notes played over time measured in seconds (All The Things You Are, Groovin High)	155
5.12	Number of notes played over time measured in seconds (Autumn Leaves)	156
5.13	Number of notes played over time in seconds (If I Were A Bell, In Love In Vain)	157
5.14	Number of notes played over time measured in beats (All The Things You Are, Groovin High)	158
5.15	Number of notes played over time measured in beats (Autumn Leaves)	158
5.16	Number of notes played over time measured in beats (Stella By Starlight, If I Were A Bell)	159
5.17	Number of notes played over time measured in beats (Someday My Prince I Will Come)	160
5.18	Count of notes played in each measure (All The Things You Are)	162
5.19	Count of notes played in each measure (If I Were A Bell)	163
5.20	Count of notes played in each measure (Groovin High)	164
5.21	Different phrase lengths in all solos	171
5.22	Melodic phrase excerpt (In Love In Vain)	173
5.23	Different phrase lengths across all solos (All The Things You Are)	174
5.24	Different phrase lengths across all solos (Groovin High)	174

5.25	Different phrase lengths across all solos (Stella By Starlight)	175
5.26	Different phrase lengths across all solos (Someday My Prince Will Come)	175
5.27	Number of notes in phrase vs. commencing measure	176
5.28	Phrase starting locations within measures across all solos	178
5.29	Phrase starting locations within measures	179
5.30	Phrase ending locations within measures across all solos	180
5.31	Phrase ending locations within measures	181
5.32	Melodic phrase excerpt (Days Of Wine And Roses)	182
5.33	Melodic phrase excerpt (Groovin High)	183
5.34	Melodic phrase excerpt (Autumn Leaves)	184
5.35	Melodic phrase excerpt (My Funny Valentine)	184
5.36	Percentage of unique musical frequencies used in phrase in solos	186
5.37	Count of notes in phrase were all pitches are unique	187
5.38	Melodic phrase excerpt (Autumn Leaves)	188
5.39	Melodic phrase excerpt (My Funny Valentine)	188
5.40	Percentage of unique musical frequencies in phrases greater than ten notes	190
5.41	Pitch classes used in melodic phrases in all solos	191
5.42	Pitch classes in in melodic phrases in phrases with more than 20 notes	192
5.43	Pitch classes used in melodic phrases in phrases with more than 40 notes	193

5.44	Pitch classes used in melodic phrases in phrases with more than 60 notes	194
5.45	Percentage of unique musical durations used in phrase	195
5.46	Melodic phrase excerpt (Days Of Wine And Roses)	196
5.47	Comparison of leaps and steps in phrases greater than 40 notes in length	197
5.48	Comparison of positive and negative movements in phrases greater than 40 notes in length	198
5.49	Range measured in semitones	199
5.50	Most commonly occurring eight-note microphrases	201
5.51	Melodic phrase excerpt (Days Of Wine And Roses)	202
5.52	Melodic phrase excerpt (Days Of Wine And Roses)	202
5.53	Melodic phrase excerpt (In Love In Vain)	203
5.54	Melodic phrase excerpt (In Love In Vain)	203
5.55	Melodic phrase excerpt (In Love In Vain)	203
5.56	Melodic phrase excerpt (Groovin High)	204
5.57	Melodic phrase excerpt (Groovin High)	204
5.58	Melodic phrase excerpt (Groovin High)	204
5.59	Most commonly occurring two-note micro-phrases	205
5.60	Most commonly occurring two-note microphrases ignoring rhythm	206
5.61	Most commonly occurring two-note microphrases ignoring rhythm and transposed to start on middle C	207

5.62	Most commonly occurring four-note microphrases ignoring rhythm and transposed to start on middle C	211
5.63	Most commonly occurring five-note microphrases ignoring rhythm and transposed to start on middle C	211
5.64	Most commonly occurring six-note microphrases ignoring rhythm and transposed to start on middle C	212
5.65	Most commonly occurring seven-note microphrases ignoring rhythm and transposed to start on middle C	213
5.66	Most commonly occurring eight-note microphrases ignoring rhythm and transposed to start on middle C	214
5.67	Melodic phrase excerpt (Stella By Starlight)	215
5.68	Melodic phrase excerpt (Stella By Starlight)	216
5.69	Melodic phrase excerpt (Days Of Wine And Roses)	216
5.70	Melodic phrase excerpt (Days Of Wine And Roses)	216
5.71	Melodic phrase excerpt (Days Of Wine And Roses)	217
5.72	Melodic phrase excerpt (Autumn Leaves)	217
5.73	Melodic phrase excerpt (If I Were A Bell)	217
5.74	Melodic phrase excerpt (In Love In Vain)	218
5.75	Melodic phrase excerpt (My Funny Valentine)	218
5.76	Melodic phrase excerpt (Stella By Starlight)	218
5.77	Decision tree for the probability of choosing a note given a D5 has just been played	219
5.78	All possible outcomes following the note D5	220

5.79	All possible outcomes following the note C4 (middle C)	221
5.80	Melodic phrase excerpt (Someday My Prince Will Come)	222
5.81	Melodic phrase excerpt (My Funny Valentine)	222
5.82	Melodic phrase excerpt (Days Of Wine And Roses)	224
5.83	Melodic phrase excerpt (My Funny Valentine)	225
5.84	Melodic phrase excerpt (If I Were A Bell)	225
5.85	Melodic phrase excerpt (Days Of Wine And Roses)	225
5.86	Melodic phrase excerpt (Days Of Wine And Roses)	226
5.87	Melodic phrase excerpt (Days Of Wine And Roses)	226
5.88	Melodic phrase excerpt (Days Of Wine And Roses)	226
5.89	Melodic phrase excerpt (Days Of Wine And Roses)	227
5.90	Melodic phrase excerpt (My Funny Valentine)	227
5.91	Melodic phrase excerpt (All The Things You Are)	227
5.92	Melodic phrase excerpt (In Love In Vain)	228
5.93	Melodic phrase excerpt (In Love In Vain)	228
5.94	Melodic phrase excerpt (If I Were A Bell)	228
5.95	All possible outcomes following the note sequence G4 - Bb4	229
5.96	All possible outcomes following the note sequence C4 - Eb4	230
5.97	Different chord types used across all solos	232
5.98	Different harmonic degrees used on dominant chords across all solos	233

5.99	Resolution of the flat-seventh in the dominant chord	235
5.100	Resolution down one semitone of the flat-seventh in the dominant chord	236
5.101	Different harmonic degrees used on major seventh chords across all solos	240
5.102	Resolution of the sharp ninth in the major seventh chord	241
5.103	Different harmonic degrees used across all solos	243
5.104	Resolution of the fifth in the diminished seventh chord	244
6.1	Spotify discovery visualisation	253
6.2	Stelupa landing page	256
6.3	Search panes of application	257
6.4	World filtering metadata	258
6.5	Range filtering metadata	259
6.6	More nuanced searching	260
6.7	Phrase sequence searching using a sunburst partition	261
6.8	Piano-roll visualisation to render results	262
6.9	Pinning a result in the style of Pinterest	263
6.10	Building collections	263
6.11	Annotation a pinned excerpt	264
6.12	The built in Javascript synth	265
6.13	Stelupa Data API	266
6.14	Searching for the data in the Stelupa Data API	267