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あらまし Web
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Wikipedia
Visual Concept Visual Concept

キーワード

Towards Automatic Authoring of a Video Biography using Web Contents

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Abstract In this report, we propose an image selection method for automatic authoring of a video biography using Web contents. The video biography is composed of three parts; childhood, profession, and personal life. We extract keyphrases on important events for each of these parts from the online encyclopedia Wikipedia, and then retrieve images from an image search engine that correspond with the important events of the person in focus. Focusing on the Visual Concepts of the obtained images, by selecting images that share the same Visual Concepts that represent the keyphrases in general, we select images that visually represent the important events of the person in focus, well. We super-impose the extracted keyphrases as captions to the selected images. Finally, we make a slideshow movie showing the selected images one after another.

Key words Video authoring, Personal information, Image retrieval

1. はじめに

Web

[1]

Web

Wikipedia [1]

Youtube [2]

Web

2. 関連手法

Wikipedia

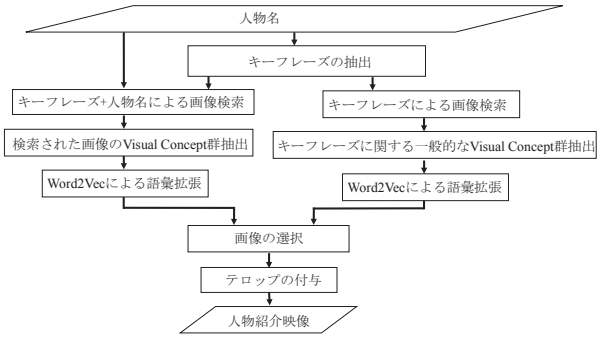
Zhang DBpedia

[2] [3] DBpedia

Jiang

[4]

Web



1

Google [4] Yahoo! [5] Bing [6]

[5]

Zhang Visual Word [6]

[7]

Jing

PageRank

[8]

3. 人物紹介映像の自動生成のための提案手法

2

1

DBpedia

DBpedia

Wikipedia

Visual Concept [9] Jing

1

3

Wikipedia DBpedia

Visual Concept

1 https://en.wikipedia.org/
2 https://www.youtube.com/
3 http://wiki.dbpedia.org/
4 https://images.google.com/
5 http://search.yahoo.co.jp/image
6 http://www.bing.com/images

3.1 キーフレーズの抽出

3.1.1

Wikipedia infobox

DBpedia

SPARQL [3]

infobox

Wikipedia

3.1.2

Wikipedia

Wikipedia

Wikipedia

Wiki

Wikipedia

Wikipedia

Wikipedia

1

	\career", \award", \honors", \public", \prize", \work", \credit"
	\personal life", \marriage", \philanthropy", \love", \activism"

2

a Elizabeth Taylor

	\England"
	\Academy Award for Best Actress", \American Film Institute", \National Velvet (lm)", \Who's Afraid of Virginia Woolf? (lm)"
	\Richard Burton", \Conrad Hilton, Jr", \Fragrance and jewelry brands", \hiv/aids activism+American Foundation for AIDS Research"

b Albert Einstein

	\Ulm"
	\Introduction to quantum mechanics", \University of Bern", \Nobel Prize in Physics", \On the Quantum Mechanics of Radiation(paper title)"
	\Mileva Marc", \Elsa Lowentha", \Love of music+violin+playing", \assisting zionist causes + World Zionist Organization"

carrier activism

1

Word2Vec [10]

1

Word2Vec

2 Elizabeth Taylor Albert Einstein 2

“+”

“+”

[redacted]

2

3.2 画像の選択

2

3.2.1

Visual Concept Visual Concept Visual Concept

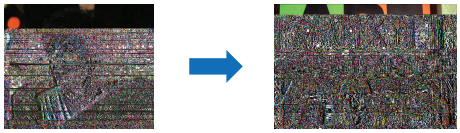
Visual Concept Visual Concept

3.2.2

2

3

	0.243	0.476



(a) Elizabeth Taylor \hiv/aids activism"

(b) Albert Einstein \Love of music"

3

4. 実 験

15

20 9

4

1

Word2Vec

4 1

Visual Concept Word2Vec

1

10 Visual Concept

Word2Vec 0.5

1 1

23.3%

3　2　“+”

3　Elizabeth Taylor　hiv/aids activism
Albert Einstein　Love of music

5. む す び

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謝辞

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