

A Comparative Analysis of Knowledge Recommendation Model for Enterprise Knowledge Portal

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Abstract

가
[1].
(knowledge Portal), (Enterprise
knowledge Portal, EKP) [5].
가
가

Keywords:

- 1.
- 2.
- 2.1
- 2.1.1

가

가

가
 가
 가
 가

2. Adaptation:

3. Exploration:

가
 가

가

가

가

가

가

Average document vector, Rocchio algorithm, clustering

2.1.2

(Vector space)

2.2.2 Average document vector

가

P

P_i

가

가

가

$$D_i = (w_{i1}, \dots, w_{im})$$

$$P = (p_1, \dots, p_m)$$

$$P_i = \frac{\sum_{j=1}^m f_{ij}}{m}$$

f_{ij} i 가 j
 m

$$sim(D_i, P) = \frac{\vec{d}_i \cdot \vec{p}_i}{|\vec{d}_i| |\vec{p}_i|} = \frac{\sum_{n=1}^m w_{nd} w_{np}}{\sqrt{\sum_{n=1}^m w_{nd}^2} \sqrt{\sum_{j=1}^m w_{np}^2}}$$

2.2.3 Rocchio algorithm

Rocchio algorithm 가

P

2.2

2.2.1

$$P = \alpha \mu_1 - \beta \mu_2$$

μ₁

μ₂

[3][7].

1. Specialization:

α, β

가

$\alpha = 0.75$, $\beta = 0.25$ 가
 가 [4].

$$P^{new} = yP^{old} + \alpha\mu_1 - \beta\mu_2$$

y, α, β

가 [3][4].

2.2.4

가
 가
 가
 가
 가
 가
 가
 가
 가

3.

3.1

[1]

[1]

| | | | |
|------------------------|-------------------------|----|---------------------------|
| | | | |
| (Category based model) | 가 | CU | 가 |
| | | CA | 가 가 |
| (Vector space model) | Average document vector | VA | Average document vector + |
| | Rocchio algorithm | VR | Rocchio algorithm + |
| | Clustered user profile | CS | Clustered user profile + |
| | | RA | |

3.2

Java

[1]

(Preprocessing)

가

(Normalizing)

(Weight) 가

frequency)

frequency)

(threshold)

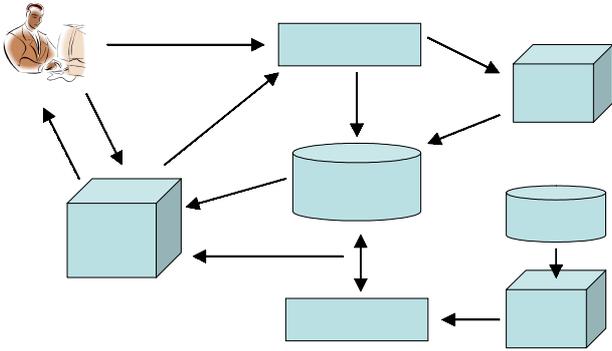
가

가

가

(tf: term

(idf: inverse document



[1]

3.3

JSP
JAVA

3.3.1

() , 7 ,
가 ID, , ,
DB 100 700

[2]

| Group | () | |
|-------|-----------|---|
| | 20%(140) | 가 |
| 1 | 40%(280) | 1 |
| 2 | 40%(280) | 2 |

3.3.2

1. 가 가 ,

2. 140
3 21

3. 가

Average document vector, Rocchio algorithm, Clustering algorithm 3가

4.1 280
VA, VR, CS 3가

CA, CU 4 ,
RA 4 가 24

5. 5
() , , , , ,
3가

6. 2
4 가

SPSS MS EXCEL ,
207 173

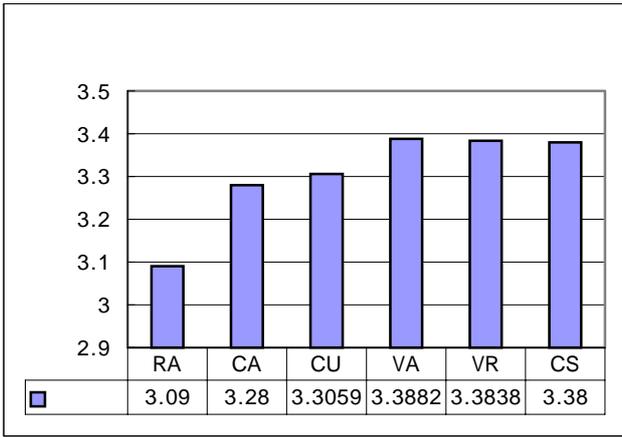
3.4

3.4.1

[3]

| | () | |
|--|-----|-------|
| | 12 | 6.9% |
| | 37 | 21.4% |
| | 8 | 4.6% |
| | 6 | 3.5% |
| | 47 | 27.2% |
| | 27 | 15.6 |
| | 36 | 20.8 |
| | 173 | 100% |

3.4.2



[2]

[2]

가

Average document vector
 VA

3.3882

가

$$H_o : \mu_{CS} = \mu_{CA} = \mu_{CU} = \mu_{VA} = \mu_{VR} = \mu_{RA}$$

repeated measure analysis
 95%

p-value 0.001

가
 가

5가

가 5가

가

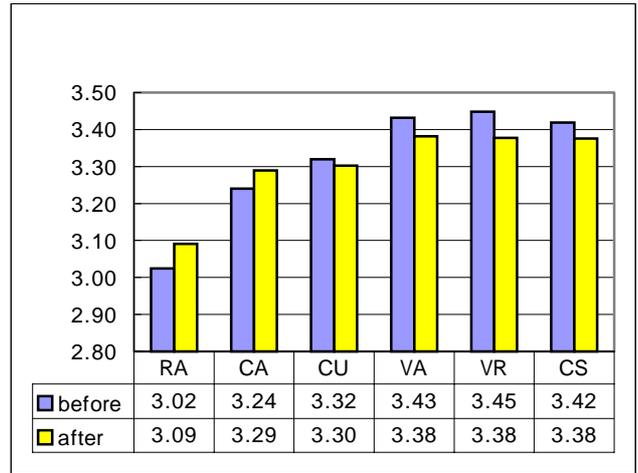
Average document vector, Rocchio algorithm,
 Clustering algorithm

가

[4]

| | | |
|--|---------|-------|
| 가 | p-value | |
| $H_o : \mu_{CS} = \mu_{CA} = \mu_{CU} = \mu_{VA} = \mu_{VR}$ | 0.643 | H_o |
| $H_o : \mu_{CA} = \mu_{CU}$ | 0.757 | H_o |
| $H_o : \mu_{CS} = \mu_{VA} = \mu_{VR}$ | 0.951 | H_o |

3.4.3



[3]

[3]

가

CA

가

T-test

5가

95%

[5]

| | | |
|--|---------|-------|
| | P-value | |
| $H_o : \mu_{CU,initial} = \mu_{CU,feedback}$ | 0.655 | H_o |
| $H_o : \mu_{CA,initial} = \mu_{CA,feedback}$ | 0.216 | H_o |
| $H_o : \mu_{VA,initial} = \mu_{VA,feedback}$ | 0.219 | H_o |
| $H_o : \mu_{VR,initial} = \mu_{VR,feedback}$ | 0.093 | H_o |
| $H_o : \mu_{CS,initial} = \mu_{CS,feedback}$ | 0.256 | H_o |

3.5

가

가

가

가

가

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4.

5가

가

()

, JAVA

가

(semantic)

LSI (Latent Semantic Index)

Acknowledgments

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